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ABSTRACT

The guide is designed to accompany an art program curriculum guide in order to help teach senior high art and to locate resources and information. Included in the guide are the following titles: "Sample Unit Plans," which include information on theme, approach, objectives, concepts, motivation, resources, study approaches, and evaluation for the program's three aspects of art learning; "Facilities, Equipment, and Materials," which describe the physical resources necessary to accommodate program goals; "Art Displays, Art Shows, and Art Contests," which describe specific opportunities to display art products; "Careers in Art," which list 102 careers; "Glossary," which defines terms appropriate to the curriculum guide; "Resources," which include print and visual sources; "Hazardous Art Materials and Occupational Safety," which include information and resources about the safe use, storage, and disposal of art materials; and "Technographic Media," which explores the potential of emerging technologies. (TRS)

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ART
SENIOR HIGH

Art 10 Art 11
Art 20 Art 21
Art 30 Art 31

Curriculum Alberta

Teacher Resource 1986

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Teacher Resource 1986

This resource is designed to accompany the Art 10, 20, 30 Curriculum Guide and the Art Studies 11, 21, 31 Curriculum Guide. The following items are designed to facilitate the teaching of senior high art and the locating of resources and resource information. Included in this document are the following titles:

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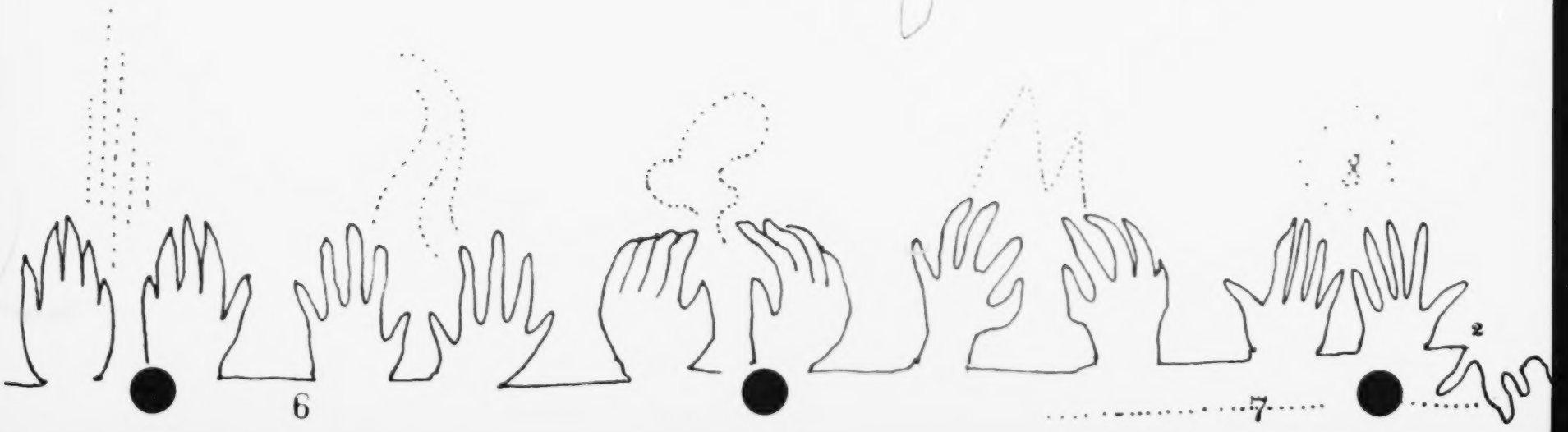
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Sample Unit Plans

Sample Unit Plan - **Art 10 - "Abstracting from Nature"**

Theme:

Compositions: Developing both two- and three-dimensional abstract images from a single subject source.

Approach:

Abstracting from a source. Have students explore the visual qualities of an object, then use that object as a source of abstract images and designs in both two and three dimensions.

Objectives: Students will:

1. extend their knowledge of and familiarity with the elements and principles of design through practice in composing two- and three-dimensional images. (Compositions)
2. solve teacher-directed problems of unity and emphasis in creating compositions. (Compositions)
3. use the vocabulary of art criticism to develop and accept analyses of their own work. (Compositions)
4. be conscious of the emotional impact that is caused and shaped by a work of art. (Compositions)
5. investigate the process of abstracting form from a source in order to create objects and images. (Encounters)
6. develop and refine drawing skills and styles. (Drawings)

Concepts:

- Natural forms can be used as sources of abstract images and designs.
- Color and value concepts are important components of an artist's compositional skill.
- Unity is achieved by controlling the elements of a composition within the picture plane.
- Describing and discussing media and techniques used in one's own works will develop vocabulary.
- Describing and discussing components of design are part of the process of analyzing one's own work.
- Image making is a personal experience created from ideas and fantasies.
- Artists simplify, exaggerate, and re-arrange parts of objects in their depictions of images.
- Artists select from natural forms in order to develop decorative motifs.

Motivation:

- Collect a variety of natural objects (suggest ones that won't deteriorate over a few weeks): shells, driftwood, eroded stones, seedpods, plants, pine cones, dried flowers, vegetables, bones. Have students examine and handle several objects, noting surface qualities, weight, color shading, signs of growth and decay.

cont....

- View works of art that contain organic forms presented in realistic and abstracted images. View examples of functional objects that are designed after organic forms (architecture, jewelry, dishes). View laserdisc images of microscopic organisms, aerial photographs of land forms.

- Discuss the qualities of line and surface form that characterize natural, as opposed to man-made objects--irregular markings, growth rings, evidence of erosion, pressure, scarring).

- Have each student select one object which has visual or tactile qualities that intrigues her or him. This will be their source object for the duration of the unit.

Resources:

A. Visual -
Slides: Lalique jewelry and mirror; Tiffany vase; Klimpt "Park 1903"; O'Keefe "Black Iris", "Banana Flower"; van Gogh "Sunflowers"; works by Aubrey Beardsley, William Morris, Jean Arp; Le Corbusier's Church at Ronchamp; Wright's Guggenheim Museum.

B. Readings and References -
Kranz and Fisher, "The Design Continuum"; Collier, "Form, Space and Vision"; Roukes, "Art Synectics" (page 19), in addition to readings and references listed on the concept pages.

C. Other Resources and Materials -
Scientific magazines, magnifying glasses, patterned fabrics, wallpaper and wrapping paper designs, ceramics sculptures.

Study Approaches:

1. With the large group, discuss the qualities of the collected natural objects as described in motivation.

2. Using a duplicated form outline, have students prepare a detailed descriptive analysis and identification of their object as if it were an archaeological find (size, weight, color, shape, noticeable surface markings, place found, smell, etc.).

3. Students do a series of renderings of the object:

   a) particular, detailed realistic renderings
   b) close-up views of surface textures
   c) color renderings using pastels, inks, watercolors, cut colored papers, etc.
   d) drawings that emphasize and exaggerate characteristic features
   e) repeated pattern designs based on the strongest, dominant shape of the object
   f) gesture and contour drawings of the object
   g) 3-D study of the object, hand-sized, in clay, wire, papier mache. Work to represent one aspect of the object: mass, surface texture, shape

cont....

SAMPLE UNIT PLANS - Art 10 (cont'd)

4. Final Compositions: (Students do both)

   a) A 2-D color composition in any medium that draws on one of the realistic on stylized renderings done in the preliminary works (could be a poster design, print, mixed media image, fabric design, weaving, painting, collage).

   b) A 3-D composition in any medium that derives its basic forms and use of space from the original object. This could be a maquette for a garden sculpture or a prototype for a functional object such as a container, piece of furniture, architectural design for a residence or public building. Suggest using word, styrofoam, cardboard, clay, plastic, wire, papier mache.

5. Write descriptions of both final compositions that discuss use of materials, interesting visual details, problems of composition, elements of design brought into play, student's personal preferences for parts of the project.

6. Critique: Display each student's 2-D and 3-D compositions with the original object. Each student has three minutes to describe the choices he or she made in emphasizing certain aspects of the original object. Fellow students have opportunities to ask questions.

Duration: Six weeks plus.

Evaluation:

Evaluate the whole set of works of each student - preliminary drawings, color renderings, written analyses, descriptions, final 2-D and 3-D projects.

Use checklists and student-teacher conferences. Works should show evidence of:

- use of correct terms to describe materials and elements of design in written work
- efforts to use a variety of drawing techniques
- efforts to use emphasis and exaggeration
- careful, expressive use of color
- carefully developed relationship between realistic and abstract renderings
- completion of all preliminary and final requirements of the unit

In critique discussions, listen for comments that use vocabulary of design elements; listen for evidence of students thinking about the ways artists and designers use organic forms as inspiration for their work.

NOTE: The boxes on the following charts indicate objectives and concepts used in SAMPLE UNIT PLAN - ART 10 - "Abstracting from Nature".

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Objectives and Concepts
Art 10

Drawings

STUDENTS WILL:

Record

COMBINE DESCRIPTION, EXPRESSION AND COGNITION IN THE DRAWING PROCESS.

Concepts:

A. Subject matter and expressive intention can be depicted with a variety of notational marks.

B. The expressive content of drawings is affected by the drawing media selected.

Investigate

DEVELOP AND REFINE DRAWING SKILLS AND STYLES.

Concepts:

A. A change in drawing techniques can express a different point of view about the same subject matter.

B. Tactile qualities of surfaces can be rendered through controlled use of line.

C. Linear perspective is a representational device that gives the illusion of three dimensional pictorial space.

D. Natural forms can be used as sources of abstract images and designs.

Compositions

STUDENTS WILL:

Components

EXTEND THEIR KNOWLEDGE OF AND FAMILIARITY WITH THE ELEMENTS AND PRINCIPLES OF DESIGN THROUGH PRACTICE IN COMPOSING TWO AND THREE DIMENSIONAL IMAGES.

Concepts:

A. Color and value concepts are important components of an artist's compositional skill.

B. Positive and negative space are essential to the description of two and three dimensional forms.

Relationships I

SOLVE TEACHER-DIRECTED PROBLEMS OF UNITY AND EMPHASIS IN CREATING COMPOSITIONS.

Concepts:

A. Compositions use positioning and grouping of subjects for different meanings and emphasis.

B. Unity is achieved by controlling the elements of a composition within the picture plane.

Relationships II

SOLVE TEACHER-DIRECTED SPATIAL PROBLEMS OF MOVEMENT AND DIRECTION IN THE CREATION OF COMPOSITIONS.

Concepts

A. Movement, rhythm, and direction are used in recording humans and their activities.

Encounters

STUDENTS WILL:

Sources of Images

INVESTIGATE THE PROCESS OF ABSTRACTING FORM FROM A SOURCE IN ORDER TO CREATE OBJECTS AND IMAGES.

Concepts:

A. Artists simplify, exaggerate, and re-arrange parts of objects in their depictions of images.

B. Artists select from natural forms in order to develop decorative motifs.

Transformations Through Time

COMPARE THE IMAGE CONTENT OF CERTAIN PERIODS.

Concepts:

A. Works of art contain themes and images which reflect various personal and social conditions.

B. Technology has an effect on materials used in image-making.

Impact of Images

BECOME AWARE OF THE RELATIONSHIP BETWEEN FUNCTION AND FORM IN ARTISTIC PRODUCTIONS.

Concepts:

A. Simplified form communicates the purpose and function of designed objects.

B. The function of an art work can be emphasized by its decoration.

Communicate

INVESTIGATE VARIETIES OF EXPRESSION IN MAKING IMAGES.

Concepts:

A. Drawings can express the artist's concern for social conditions.

B. A drawing can be a formal analytical description of an object.

Articulate and Evaluate

USE THE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO ANALYZE THEIR OWN WORKS.

Concept:

A. Discussing the components of composition is part of learning to talk about art.

Relationships 3

USE THE VOCABULARY OF ART CRITICISM TO DEVELOP AND ACCEPT ANALYSES OF THEIR OWN WORK.

Concepts:

A. Describing and discussing media and techniques used in one's own works will develop vocabulary.

B. Describing and discussing components of design are part of the process of analyzing one's own work.

Organizations 1

EXPERIMENT WITH VARIOUS REPRESENTATIONAL FORMATS.

Concept:

A. Various materials alter representational formats and processes used in achieving certain intended effects.

Organizations 2

BE CONSCIOUS OF THE EMOTIONAL IMPACT THAT IS CAUSED AND SHAPED BY A WORK OF ART.

Concepts:

A. Image making is a personal experience created from ideas and fantasies.

B. Mood is created by tools like atmospheric perspective.

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SAMPLE UNIT PLANS

Sample Unit Plan - **Art 20 - "The 'Isms' of Modern Art"**

Theme:

Drawings: Understanding stylistic movements and exploring personal styles.

Approach:

Students explore their own personal style characteristics by first examining those of different artists of the 19th and 20th centuries, then creating their own expressive drawing statements. Critical analysis and personal expression will be important goals.

Objectives: Students will:

1. explore a personal selection of expressions. (Drawings)

2. use the vocabulary and techniques of art criticism to interpret and evaluate both their own works and the works of others. (Drawings)

3. acquire a repertoire of visual skills useful for the comprehension of different art forms. (Encounters)

Concepts:

- Personally selected themes can provide images for expressive drawing investigations.

- Understanding styles or artistic movements related to visual studies is part of developing critical abilities.

- Meaning is expressed in works of art through subject choice, media selection, and design element emphasis.

- Art forms may be classified according to stylistic characteristics.

- The relationships of different features of a work of art may be compared to the total effect of the work.

- Artists depict subjects from different points of view.

Motivation:

Students imagine that they are art connoisseurs and collectors attending the sale of some famous works of art. Using slides and reproductions of works of Impressionist, Surrealist, Cubist and Fauvist works of art, conduct a mock art auction. Have class members use their critical analysis skills to justify their bids. Students work in teams, pairs or individually. They can have a few days to research the works for sale and prepare explanations for wanting to acquire the works they choose.

During the introduction to this phase of the unit, teachers should:

- discuss the origins of the various styles.
- describe the artists represented.
- discuss the preferred subject matter of those artists.
- discuss the theme, mood, purpose and compositional features of the styles and the particular works "for sale".

Cont'd

Resources:

A. Visual -
Works of Salvador Dali, Henri Matisse, Pablo Picasso, Joan Miro, Paul Klee, Max Ernst, Georges Braque, Edouard Manet, Claude Monet, Edgar Degas, Auguste Renoir, Georges Seurat. Posters of their works. Include both drawings and paintings by these artists.

B. Readings and References -
Elsen, A. "Purposes of Art"; Richardson, "Art: The Way It Is"; Simons and Winer, "Drawing: The Creative Process". Art books and books about the individual artists listed above; films and stories about the artists or movements.

C. Museums and Galleries -
Class visits to current and permanent exhibits of local art galleries. Engage help of education officers, curators or gallery owners to explain works.

Study Approaches:

1. Art auction exercise described in motivation section.

2. Students select a style (Surrealist, Impressionist, Fauvist, Cubist). Using their preferred subject matter, they develop a set of drawings and a painting that demonstrate the characteristics of that style.

3. Students then do a series of drawings and paintings that emphasize their own personal stylistic signature, with their own preferred subjects and media.

4. The works of art are submitted with a personal statement describing the characteristics of the students' own style, the artists who influenced him or her, reasons for preferring particular media and a description of the student's goals for personal stylistic development.

5. Critique -
Students make short presentation describing their stylistic traits, comparing those with the style movements they explored in the earlier study approach, and field questions from the class about problems, interesting discoveries, etc.

Duration: Four weeks

Evaluation:

Evidence -
Auction discussions, personal statements, critique presentation, set of student works.

Assess for evidence of understanding of comparative qualities of the different "isms" and how the students' own works contain personal style characteristics as well as influences from contemporary artists. Use checklists, written work and student-teacher interviews as evaluation tools. Test students' ability to recognize and discuss dominant aspects of a style or movement by presenting slides to them for written analysis. Hold small group or teacher-student discussions to evaluate students' knowledge of their own personal expressive style.

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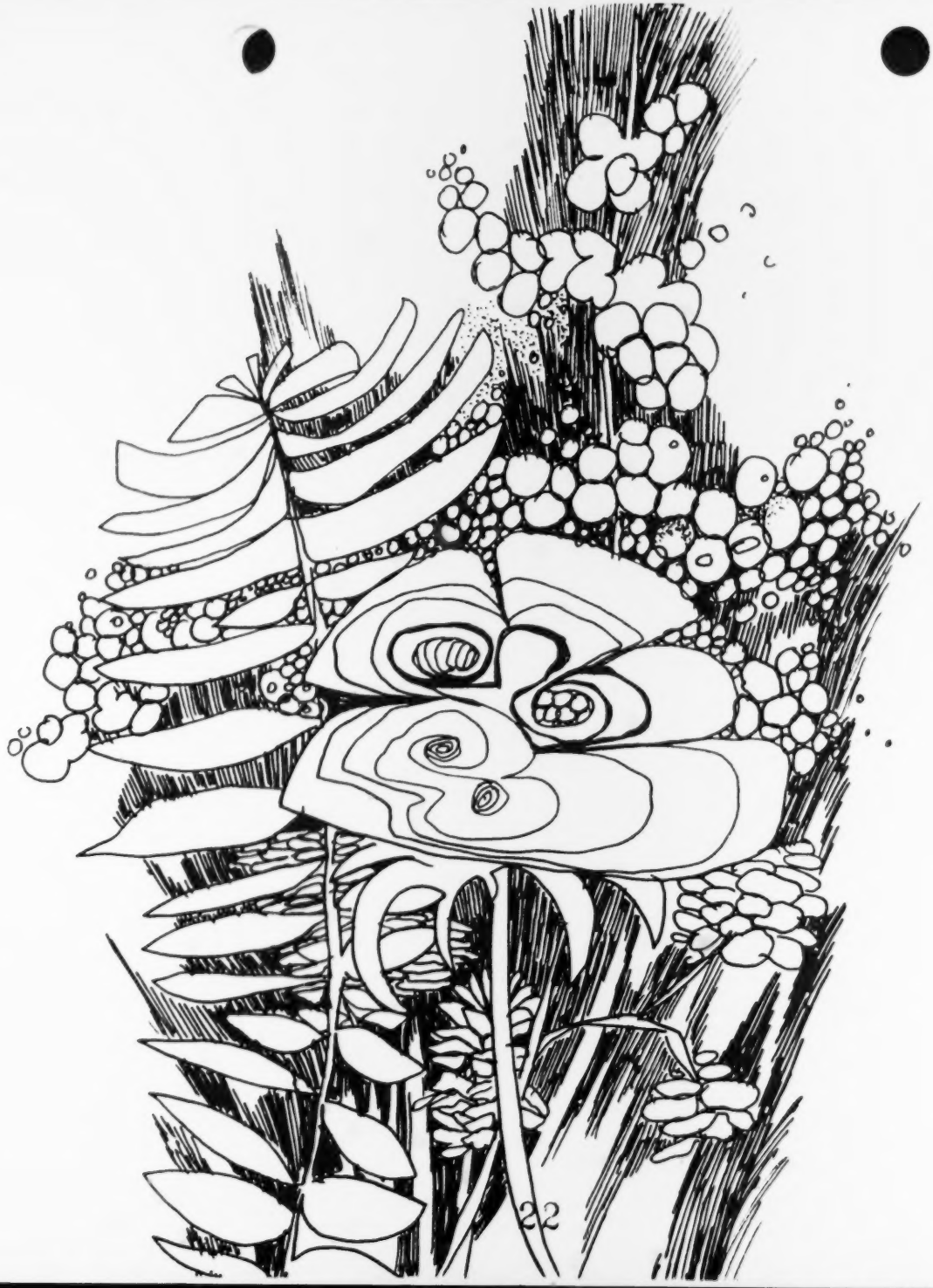
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Objectives and Concepts
Art 20

Drawings

STUDENTS WILL:

Record

DRAW FOR CONFIDENCE AND CONSOLIDATION OF HEAD TO HAND SKILLS.

Concepts:

A. Sketching and composing skills can be developed by drawing from representational sources.

B. Developing expertise in one particular drawing medium may further develop personal competence.

C. Combining mental images and representational images in drawing may provide a challenge to an individual's drawing skills.

Investigate

DEVELOP AND REFINE DRAWING SKILLS AND STYLES.

Concepts:

A. Points of view can vary according to the expressive purposes of the drawing.

B. Partial delineations demonstrate a control of space and form by the use of implied line.

C. Control of proportion and perspective enhances the realism of subject matter in drawing.

Compositions

STUDENTS WILL:

Components

USE NON-TRADITIONAL APPROACHES TO CREATE COMPOSITIONS IN BOTH TWO AND THREE DIMENSIONS.

Concepts:

A. The use of non-traditional media affects the development of a two or three dimensional object.

B. The exploration of existing technology may influence the development of two and three dimensional images.

C. Chance occurrences or accidental outcomes can influence the making of a work of art.

Relationships 1

SOLVE TEACHER AND STUDENT DEVELOPED PROBLEMS BY VARYING THE DOMINANCE OF DESIGN ELEMENTS FOR SPECIFIC VISUAL EFFECTS.

Concepts:

A. Meaning in composition is affected by reversing or distorting positive and negative elements.

B. Exaggerating, distorting, and rearranging parts of images are means of solving visual problems.

C. Shifting perspective or changing the point of view are means of solving visual problems.

Encounters

STUDENTS WILL:

Sources of Images

RECOGNIZE THAT WHILE THE SOURCES OF IMAGES ARE UNIVERSAL, THE FORMATION OF AN IMAGE IS INFLUENCED BY THE ARTIST'S CHOICE OF MEDIUM, THE TIME AND THE CULTURE.

Concepts:

A. Different periods of history yield different interpretations of the same subject or theme.

B. Artists and craftspeople use the possibilities and limitations of different materials to develop imagery.

C. Different cultures exhibit different preferences for forms, colors and materials in their artifacts.

Transformations Through Time

INVESTIGATE THE IMPACT OF TECHNOLOGY ON THE INTENTIONS AND PRODUCTIONS OF THE ARTIST.

Concepts:

A. The adoption of a new medium will effect change in an artist's work.

B. Technology has an impact on the artist's role in modern society.

C. Technology has an effect on materials and imagery used in modern sculpture and painting.

Communicate

EXPLORE A PERSONAL SELECTION OF EXPRESSIONS.

Concept:

A. Personally selected themes can provide images for expressive drawing investigations.

Articulate and Evaluate

USE THE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO INTERPRET AND EVALUATE BOTH THEIR OWN WORKS AND THE WORKS OF OTHERS.

Concepts:

A. Understanding styles or artistic movements related to visual studies is part of developing critical abilities.

B. Discussion of the compositional relationships and effectiveness of components is part of learning to interpret one's own art work.

C. Identified similarities in art works can enhance interpretive discussions of concerns, themes, subjects or treatments.

Relationships 2

USE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO INTERPRET AND EVALUATE BOTH THEIR OWN WORKS AND THE WORKS OF OTHERS.

Concepts:

A. Meaning is expressed in works of art through subject choice, media selection, and design element emphasis.

B. Art forms may be classified according to stylistic characteristics.

Organizations

DEMONSTRATE CONTROL OVER VARIOUS COMPONENTS OF COMPOSITION.

Concepts:

A. Developing several approaches to a single problem can demonstrate a refinement of organization and structure in composition.

B. An important aim of the artist is to develop compositional skills.

Impact of Images

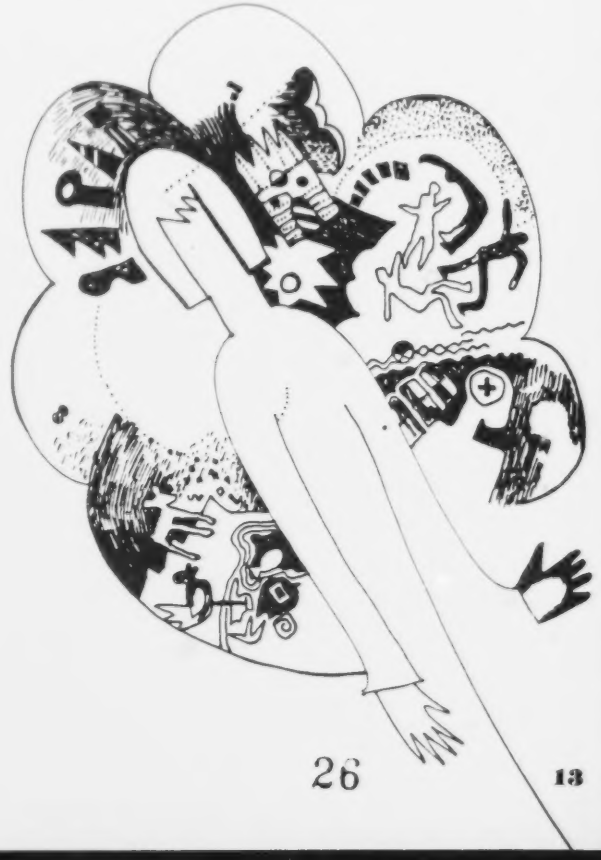
ACQUIRE A REPERTOIRE OF VISUAL SKILLS USEFUL FOR THE COMPREHENSION OF DIFFERENT ART FORMS.

Concepts:

A. The relationships of different features of a work of art may be compared to the total effect of the work.

B. Artists depict subjects from different points of view.

C. Throughout history a wide range of media and techniques has been used to make art.



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Sample Unit Plan - **Art 11 - "The Art of Belief"**

Theme:

The power of the Artifact: How peoples' beliefs are expressed in their art forms.

Approach:

A comparative analysis of art forms that express strong cultural meaning (religious meaning) in different cultures, including contemporary. Students study and research the rituals and events represented by the architecture, painting, sculpture, and decoration of temples, churches and shrines in several different cultures. They engage in group projects for presentation, focusing on a single selected culture.

Objectives: Students will:

1. consider artifacts which transmit different themes, meanings, beliefs and values of people in various times and cultures. (Function of Art)

2. consider the characteristic styles attributed to various cultures and historic periods as they affect the way that culture or period is identified. (Creation of Art)

3. be able to describe and characterize visual features of artifacts such as subjects, media and design. (Appreciation of Art)

4. analyze what makes an artifact powerful over time and across cultures. (Appreciation of Art)

Concepts:

- Beliefs and deities are treated through artifacts such as movements, icons and religious architecture.

- Comparisons between artifacts of two different cultures reveal distinguishing characteristics of style.

- Recognizing and describing the kind of media of artifacts is part of understanding both historic and contemporary artifacts.

- Recognizing and describing the subject matter and design components of artifacts is part of understanding both historic and contemporary artifacts.

- Different symbols and objects from different societies often have similar meanings.

Motivation:

- Large group presentation: a) Film, video or reading from a novel that portrays a religious ceremony from an ancient culture - Egyptian, Greek, Roman, Far Eastern. Laserdisc, slide and photographic images of religious architecture, sculpture, tomb decoration, painting, costumes from the above cultures plus Byzantine, Gothic, Renaissance, African, etc. (whatever your library and resources provide); b) Discussion that brings out commonalities of form in these different artifacts and ceremonies, e.g., splendour, ceremony, visual symbolism, personal

cont....

and architectural adornment. (See individual concept pages for specific item to study.)

Note: The cultural comparison to be made in this unit involves discussions about the meanings and values attached to different religious artifacts and beliefs. This material could be sensitive for some class members. It is important that teachers stress the fact that all cultures have identifying traits and symbols, and that tolerance and understanding of the beliefs of others is an inherent goal of the Arts Studies program.

Resources:

A. Visual -
Films, slides, laser disc visuals, muslum artifacts, novels, movies that portray religious and beliefs from other times and cultures.

B. Readings and References -
Elsen, Purposes of Art; Cunningham and Reich, Culture and Values, Vol. I and II; Clark, Civilization; books about the specific cultures selected for study (teachers should review library holdings before starting unit).

Study Approaches:

1. Group research project -
Group of three to five students selects a culture or period to be studied in depth. Their assignment is to develop an imaginative class presentation that explains the belief system of a culture and how that system is portrayed through its art forms. They will be required to research and report on the following topics: churches or temples, monuments, icons, important symbols, rituals, costumes, records. They must learn and use the correct terminology to describe the techniques, materials, tools and styles that are characteristic of these forms. They must describe and analyze the deities, how they are represented in the culture, and how the religious art is incorporated into the culture. But, the key element is an imaginative presentation: they can develop a play, scrapbook, slidetape presentation, scale models, diaries, simulated archaeological dig, simulated museum show. They must present and explain all the major visual features of the religion of that culture, and describe how it fits into the culture as a whole (e.g., Egypt's God - kings were both deities and monarchs).

2. Group Presentation -
Each group presents its material to the class. All members must participate in the presentation. A printed overview or class notes must be provided to give each observer access to the terminology and descriptive details.

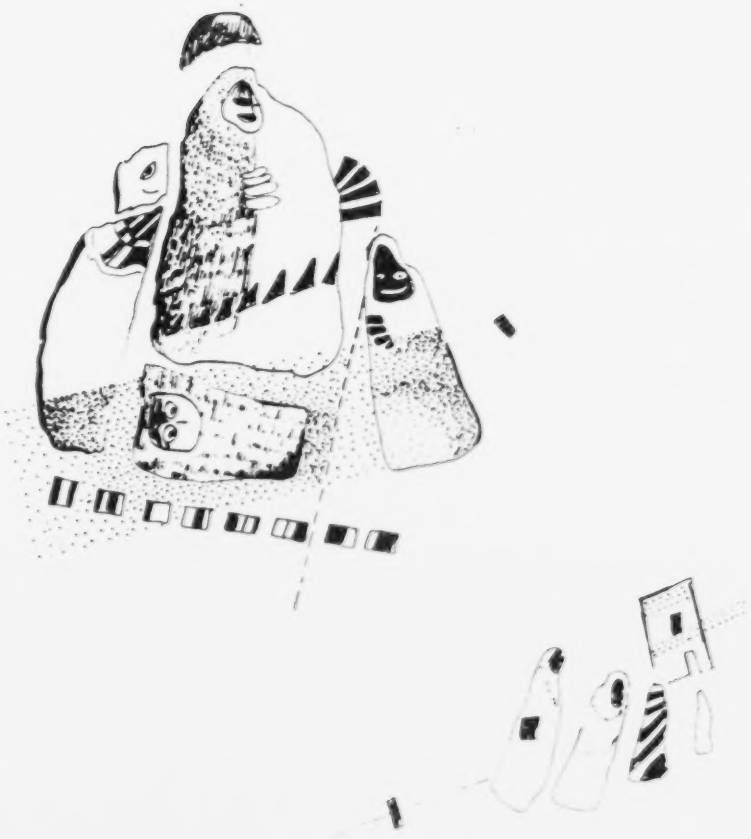
3. Final Discussion -
After all presentations are completed, a comparative analysis can be conducted in large group to identify the differences and similarities between the various ages on the basis of the original topics - churches and temples, monuments, icons, important symbols, costumes, rituals, records. Class can be asked to speculate on how the beliefs of our culture will be interpreted by archaeologists and art historians of the distant future. Individual written statements could be required here.

Duration: Four weeks plus

cont....

Evaluation:

Evaluation of individual student performance: Use self-evaluation sheets to assess participation in group projects, use anecdotal records, checklists and individual written statements. Quizzes and written paragraph tests could be used to assess students' understanding of specific terms. Look for evidence of increased skill in identifying and describing the subject matter, style, techniques and media of historical art works. Look for increased willingness to make analytical and descriptive comments about artifacts and art ideas in large and small group dicussions.



Objectives and Concepts
Art 11

Function

STUDENTS WILL:

- **consider artifacts which transmit different themes, meanings, beliefs and values of people in various times and cultures**

Concepts:

A. The themes of Life and Death are treated through artifacts such as tomb paintings, fertility gods, masks and totems and guardian figures.

B. Themes of Dreams and Fantasies are treated through artifacts such as painting, advertising art, science fiction and surrealism.

C. Beliefs and Deities are treated through artifacts such as monuments and icons and religious architecture.

D. The themes of Authority and Power are treated through artifacts such as crowns, uniforms, flags, emblems and public architecture.

E. Social position is identified through artifacts such as symbols of office, profession, status, rank, degrees or honors, sexuality and heroism.

F. Artifacts serve personal functions when they give adornment, indicate mourning, rites of passage or celebration, give protection, suggest "ferocity", or personal power.

Creation

STUDENTS WILL:

- **consider the nature of artists' styles and their effect on the character of artifacts**

Concepts:

A. The individual nature of style is used to identify the work of individual artists:- features of an artist's works makes them recognizable as the products of that artist only.

B. An artist's work changes in nature over his/her lifetime.

- **consider the characteristic styles attributed to various cultures and historic periods as they affect the way that culture or period is identified**

Concepts:

A. Periods of art history can be identified by characteristic design features and styles.

B. Comparisons between artifacts of two different cultures reveal distinguishing characteristics of style.

- **learn how artists work with media: they will acquire the ability to distinguish materials and processes used in various kinds of artifacts**

Appreciation

STUDENTS WILL:

- **be able to describe and characterize visual features of artifacts such as subjects, media and design**

Concepts:

A. Recognizing and describing the kind and media of artifacts is part of the understanding both historic and contemporary artifacts.

B. Recognizing and describing the subject matter and design components of artifacts is part of understanding both historic and contemporary artifacts.

- **be able to analyze relationships among the visual features of artifacts such as subjects, media and design, and attribute meaning from this analysis**

Concepts:

A. Making inferences about the meanings of art works is part of the process of understanding both historic and contemporary artifacts.

B. Developing the ability to classify works of art according to an analysis of style characteristics is part of the process of understanding both historic and contemporary artifacts.

- **consider how people react differently toward a work of art depending upon past experience**

G. Art serves play and recreations functions as displayed in objects used in games such as chessmen, cards, dolls, puppets and toys.

- **become aware of the function of artifacts to describe and record phenomena**

Concepts:

A. Artifacts can describe and record events.

B. Artifacts can describe and record places.

C. Artifacts can describe and record people.

D. Artifacts can describe and record nature.

E. Artifacts can describe and record traditions.

F. Artifacts can describe and record ideas.

- **become aware of the function of artifacts for the visual enhancement of people and their environments**

Concepts:

A. Artifacts have the power to enhance ourselves.

B. Artifacts have the power to enhance our communities.

C. Artifacts have the power to enhance our homes and environments.

Concepts:

A. Artifacts contain evidence of techniques that comprise the skills of the artist.

B. Color is a powerful artistic tool; it affects both artist and viewer.

- **observe how artists achieve different effects with the elements and principles of composition**

Concepts:

A. The artist orders elements of design in developing a composition.

B. The components of formal composition include principles and conventions of design.

Concepts:

A. A wide variation in preference for art forms or features of art can be found among individuals.

B. Meaning in art work is perceived differently by people with different attitudes toward the subject matter.

- **analyze what makes an artifact powerful over time and across cultures**

Concepts:

A. The power or meaning of an artifact can be located in the artifact, its culture, its creator or its beholder.

B. Different symbols and objects from different societies often have similar meanings.

- **become aware of the range and variety of forms of artistic expression**

Concepts:

A. Learning the styles and purposes of the range of contemporary artifacts is part of the process of becoming a knowledgeable viewer.

Sample Unit Plan: The Art 30 student is expected to participate actively in the decision making regarding her/his choice of art problems and media throughout the course. Characteristics one might expect to see in **Art 30** students are: **- increasing responsibility for artistic development, increasing competence in at least two media, expanding critical awareness, and increasing dedication to the search for visual ideas.**

The unit plan that follows is in three parts. Part A is a suggestion for motivational activities directed by the teacher. Part B is a sample unit plan devised by a student. Part C is a list of objectives and concepts that the teacher sees in the student plan. Part C may be selected by the students, as well. It is important that Part C be used by the teacher and student to identify readings, visual resources, study approaches, evaluation approaches and evaluation criteria for the students' use in their unit.

Part A: Teacher Directed

Theme: Initiating Student Planning

Approach: Teacher structures first part of unit, so that students can explore how to select visual problems, media to be considered, developing possible image banks, and how to sequence a series of investigations and develop evaluative criteria.

Objectives and Concepts:	**Evaluation Approaches:**	**Evaluation Criteria:**
. **Drawing . Record** STUDENTS WILL ACHIEVE PERSONAL STYLE. Concept: Individual treatment of similar subjects or thematic matter may serve to identify individual artists.	Observe participation in discussion. Note ability to articulate artistic problem delineation processes. Recognize that individual responses to problems set is a credible artistic and personal goal. Record individual goals and artistic interests.	Commitment to personal methods of working and content selection increases.
. **Composition . Components** STUDENTS WILL USE PERSONAL EXPERIENCES AS SOURCES FOR IMAGE MAKING. **Concept:** An important aim of the artist is the selection and presentation of perceptions, conceptions and experience as visual content for art work.	Acquire comments re: student's creative decisions. Observe and note variety of material student selects to "bounce off", or review. Note selection processes.	A commitment to a theme or series of explorations is made. Media experiences are selected (2-D/3-D). A more intuitive and a more critical approach to problem selection is developed in the student.

Objectives and Concepts: (cont'd)	**Evaluation Approaches:**	**Evaluation Criteria:**
. **Encounters . Impact of Images** STUDENTS WILL QUESTION SOURCES OF IMAGES THAT ARE PERSONALLY RELEVANT IN SIGNIFICANCE TO THEM IN CONTEMPORARY CULTURE. **Concept:** Imagery can depict an important local political or social issue.	Look for personal records of attended art events throughout unit. Review with students collection of artistic responses and news items throughout unit. (Actual selections in next unit may/may not occur.)	Analysis of social or political events occurs. Artistic interpretation of these events increases. Art works understood to be a useful way of commenting on a situation.
. **Compositions . Relationships 2** STUDENTS WILL USE THE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO ANALYZE AND EVALUATE THEIR OWN WORK IN RELATION TO THE WORKS OF PROFESSIONAL ARTISTS. **Concept:** Evaluative criteria such as originality, organization, techniques, function and clarity of meaning may be applied to works of art.	Observe spoken/written comments, looking for descriptive, analytic and interpretative comments, throughout unit. Acquire from students kinds of criteria and formats to be used during unit individually. Establish a method of group criticism to look at thematic and technical development in both a 2-D and 3-D work. Presentation of one critical assignment.	Students are able to evaluate their own and others' works according to a set of agreed upon criteria. Students use art criticism model (oral and written). Priorities in personal critical evaluations are evident and defended.

Motivation:	Resources:
. Drawing . Record	
Have students view a film. In discussion, identify all the ways these artists found ideas, explored ideas and used media.	ACCESS: Images and Things: "People Working"
Have students write in journal about immediate or ongoing artistic interests and goals. (Brief)	Journal
Review different methods of developing visual problems: a) synectics b) formal investigation c) personal conflict/expression d) stylistic interest, etc.	a) Roukes, N. Art Synectics. b) Richardson, J.A. Art: The Way It Is. pp. 175-201. c) van Gogh, V. - series of slides. d) Richardson, J.A. Art: The Way It Is. pp. 223-255 OR, slides of selected art movement.
Emphasize integrity, individual interpretation, own viewpoint of artist (student). Personal choices within a group are still identifiable as unique works of art.	
. Compositions . Components	
Have students collect portfolios, sketchbooks, journals or diaries kept over the 2-3 year high school experience. Identify themes (personal to global). Look for especially satisfying combinations of idea/problem and media use.	Journal Previous work
Review new ideas as generated by recent lists in journal of interests; participate in one of synectics et al approaches and record observations, quirks, ideas, etc.	Journal As needed, in small groups or individually.
Note primary visual interests and media interest in journal.	

Motivation:	**Resources:**
. **Encounters . Impact of Images** (cont'd)	
To continue developing a storehouse of potential investigations (later in year), students can be asked to keep a record of local art events that interest them/that they attended (discussion, notes, invites, catalogues, etc.).	Journal/Sketchbook
Particular public artistic responses to local news can be collected.	Images if available Newspapers T.V. reports recorded Magazines Radio items Advertising Group information e.g., curling rink Slides of an artist's work that responded to local situation; e.g., Aislin, Bierman, Kollwitz, Moore Murals Folk artists of the area Artist graffiti
News items that move, bother, outrage, please, humor, amuse, confound the students can be collected, especially local or regional, as these may suggest some visual expression.	
. **Compositions . Relationships 2**	
. Discussion of kinds of evaluations and content of evaluations to be used by student and teacher throughout unit. Both spoken and written methods are reviewed.	Ocvirk, et al. Art Fundamentals. Appendix - Art Criticism
Review the artist/doer/consumer/critic model, and emphasis on different aspects of art making.	Media books as appropriate
Technical goals (media/skills) can be reviewed individually/groups.	Research material as appropriate (textual and visual).
Critical assignments/project possibilities reviewed.	

Sample Unit Plan: At the conclusion of Part A, teachers could gather the following kinds of information from each student.

Part B: Student Plan

Theme: People - Alone, Together

Approach: I want to explore people in social groups - how they look, act, what they are really thinking. Can you show people's feelings and thoughts?

Influences That Help Me to Select My Theme: (artists, books, people, personal experiences, etc.):

- My own studies, sketchbooks, last year's painting project.
- Thinking about how people can see the same event differently.

Media: (2-D, 3-D, Previous Experience)

- drawing materials, yes
- b/w photographs, no
- oil paints, yes
- clay, yes

Encounters Project:

- I would like to select three artists, find out why they worked with people/images the way they did, and analyze their formal compositions for the effects they achieved. I may write it, or may present it to the class.

Studio Work:

- Series of drawings to study proportion and movement.
- Take a series of b/w photographs of people in social groups to catch people's expressions - maybe interview the people, too, to find out what they were thinking about.
- Oil painting (1m x .75m) based on my drawings and photographs.
- Clay sculpture (base 20cm sq.) based on my drawings and photographs.

Evaluation Approaches: (criteria decided in discussion with teacher and other students)

- Use of materials
- Journal records of progress, events attended, etc.
- Group critique of art works
- Criticism of theme and formal qualities in art works by self
- Teacher's critique of art works
- Research project.

(Proportion or weight to be given each part of the evaluation, to be discussed.)

Sample Unit Plan: After reviewing the student's unit plan, the teacher may identify the objectives and concepts suggested by the unit plan. This identification will assist the teacher in ensuring that all students incorporate Drawings, Compositions and Encounters objectives in their art experience. The identification will also help students to gather readings, visual resources or study approaches pertinent to their theme, and may further elaborate evaluation approaches and criteria.

Part C: Teacher Identification of Objectives and Concepts

Theme: People - Alone, Together

Objectives and Concepts:

. **Compositions . Relationships 2 Concept B**

STUDENTS WILL USE THE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO ANALYZE AND EVALUATE THEIR OWN WORK IN RELATION TO THE WORKS OF PROFESSIONAL ARTISTS.

Concept: Art works may be analyzed for personal, social, historic or artistic significance.

. **Encounters . Sources of Images Concept A**

STUDENTS WILL RESEARCH SELECTED ARTISTS AND PERIODS TO DISCOVER FACTORS IN THE ARTISTS' ENVIRONMENTS THAT INFLUENCED THEIR PERSONAL VISION.

Concept: Personal situations and events in artists' lives affect their personal visions and work.

. **Encounters . Impact of Images Concept B**

STUDENTS WILL QUESTION SOURCES OF IMAGES THAT ARE PERSONALLY RELEVANT OR SIGNIFICANT TO THEM IN CONTEMPORARY CULTURE.

Concept: Imagery can depict important aspects of a student's own life.

Further Resources:

(reading and visual as required)

Further Study Approaches:

(as required)

Further Evalution Approaches and Criteria:

(as required)

Objectives and Concepts: (Cont'd)

. **Drawings . Communicate Concept A**

STUDENTS WILL EXHIBIT A PERSONAL STYLE THROUGH IN-DEPTH STUDIES.

Concept: Recording the development of visual ideas in a consistent manner is a part of developing personal style.

. **Compositions . Components Concept B**

STUDENTS WILL USE PERSONAL EXPERIENCE AS SOURCES FOR IMAGE MAKING.

Concept: Planned and spontaneous methods of working are ways of developing images.

. **Compositions . Organizations Concept C**

STUDENTS WILL DEVELOP A PORTFOLIO OF WORKS WHICH WILL REPRESENT THEIR PERSONAL STYLE.

Concept: Personal preference for a medium that influences visual problem-solving methods.

. **Drawing . Communicate Concept B**

STUDENTS WILL EXHIBIT A PERSONAL STYLE THROUGH IN-DEPTH STUDIES.

Concept: A series of complete compositions presented for public display provides a visual statement about an artist.

Objectives and Concepts
Art 30

Drawings

STUDENTS WILL:

Record

ACHIEVE PERSONAL STYLE.

Concept:

A. Individual treatments of similar subjects or themes may serve to identify individual artists.

Investigate

DEVELOP AND REFINE DRAWING SKILLS AND STYLES.

Concepts:

A. A repertoire of drawing techniques is needed to express visual ideas.

B. Explorations of a technical or creative nature may lead individuals into highly personalized work sessions.

Communicate

EXHIBIT A PERSONAL STYLE THROUGH IN-DEPTH STUDIES.

Concepts:

A. Recording the development of visual ideas in a consistent manner is a part of developing personal style.

B. A series of complete compositions presented for public display provides a visual statement about an artist.

Compositions

STUDENTS WILL:

Components

USE PERSONAL EXPERIENCES AS SOURCES FOR IMAGE MAKING.

Concepts:

A. The selection and presentation of perceptions, conceptions, and experiences as visual content for art works is an important aim of the artist.

B. Planned and spontaneous methods of working are ways of developing visual images.

C. Color modifies the experience or idea presented in visual form.

Relationships 1

DEVELOP AND SOLVE DESIGN PROBLEMS.

Concept:

A. Individually devised design problems may lead to highly personalized works.

Relationships 2

USE THE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO ANALYZE AND EVALUATE THEIR OWN WORKS IN RELATION TO THE WORKS OF PROFESSIONAL ARTISTS.

Concepts:

A. Criteria such as originality, organization, techniques, function, and clarity of meaning may be applied in evaluating works of art.

Encounters

STUDENTS WILL:

Sources of Images

RESEARCH SELECTED ARTISTS AND PERIODS TO DISCOVER FACTORS IN THE ARTISTS' ENVIRONMENTS THAT INFLUENCE THEIR PERSONAL VISIONS.

Concepts:

A. Personal situations and events in artists' lives affect their personal visions and work.

B. Historical events and society's norms have an effect on an artist's way of life and work.

Transformations Through Time

ANALYZE THE FACTORS THAT GENERATE A WORK OF ART OR AN ARTISTIC MOVEMENT: THE EXPERIENCES OF THE ARTISTS AND THE IMPACT OF THE CULTURE.

Concepts:

A. A specific artistic movement and its works of art are influenced by the members' philosophic theme, stylistic identity, and relationship to the community in which they exist.

B. A specific artistic movement and its works of art influence later artistic movements.

Articulate and Evaluate

USE THE VOCABULARY AND TECHNIQUES OF ART CRITICISM TO ANALYZE AND EVALUATE THEIR OWN WORKS IN RELATION TO THE WORKS OF PROFESSIONAL ARTISTS.

Concepts:

A. An understanding of major 20th Century artists and movements adds to the ability to evaluate one's own work.

B. Identification of similarities and differences between the students and professional artists enhances the students' analysis of their own work.

C. The ability to discriminate between subjective response and an analytic response enhances analysis of one's work.

B. Art works may be analyzed for personal, social, historic, or artistic significance.

Organizations

DEVELOP A PORTFOLIO OF WORKS WHICH WILL REPRESENT THEIR PERSONAL STYLE.

Concepts:

A. Artistic concerns and styles will determine the conception and the organization of images.

B. Personal preference for a medium influences visual problem-solving methods.

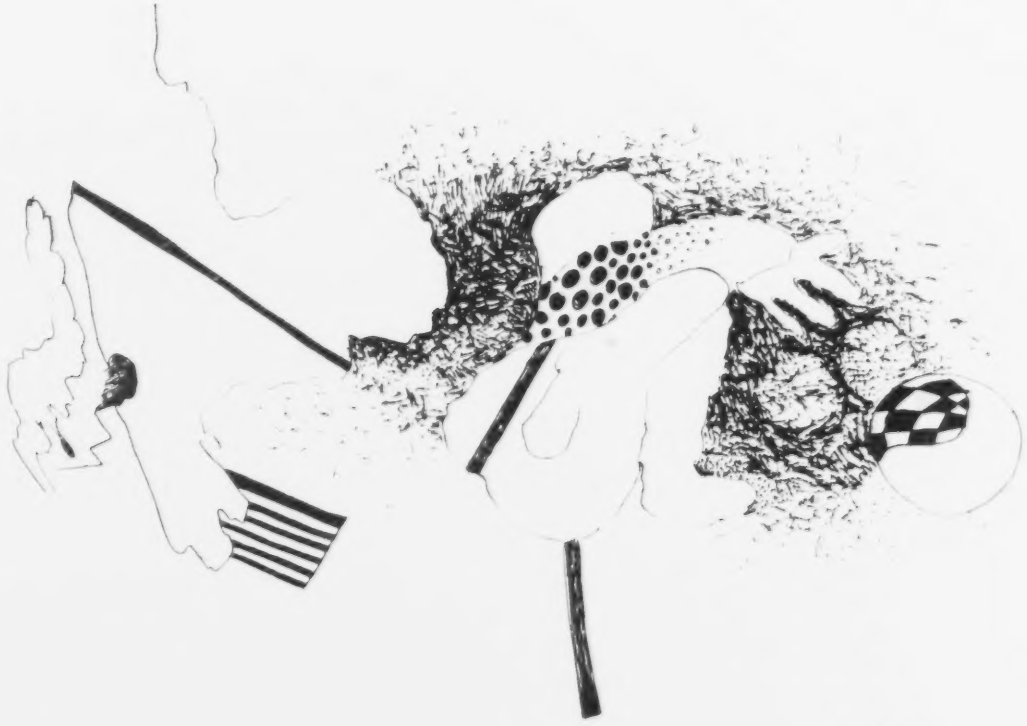
Impact of Images

QUESTION SOURCES OF IMAGES THAT ARE PERSONALLY RELEVANT OR SIGNIFICANT TO THEM IN CONTEMPORARY CULTURE.

Concepts:

A. Imagery can depict an important local political or social issue.

B. Imagery can depict important aspects of the student's own life.



Facilities, Equipment and Materials

An ideal facility for Art 10/20/30 instruction would provide the physical resources to accommodate all the goals of the art curriculum. Since this curriculum is not conceived as consisting of laboratory/studio activities exclusively, other requirements arise. The character of the activities envisioned in this guide necessitate an art room that affords safe and adequate studio facilities, ample display space, areas for viewing and discussing art works in large and small groups, and library research areas.

An ideal facility for Art 11/21/31 instruction would also provide the physical resources to accommodate all the goals of the art curriculum. Since this curriculum emphasizes the use of textual and visual resources, it is essential that the facility affords space for appropriate viewing of audio-visual presentations, ample display space, large and small group discussion areas, research areas, and storage space for student texts and materials. However, studio activities are also envisaged within this curriculum. Access to safe and adequate work space, and to appropriate materials are regarded as necessary to effective instruction for Art 11/21/31. Teachers and administrators should contact the regional consultants in Fine Arts, Alberta Education, for specific and current recommendations on facilities for art instruction.

Rooms and Spaces

1. Area - work space should be planned to accommodate a maximum of thirty students. Overcrowding interferes with both the safety of the program and effective teaching of the art curriculum. Storage space, in addition to workspace, should be determined on a per-student basis.

2. Location - on ground floor with access to deliveries.
   - northern exposure is desirable, and room should be isolated from regular classrooms (work noise is often a factor).
   - direct access to outdoors is desirable.

3. Floors - washable surface.

4. Doors - should have double doors to facilitate movement of equipment; also two exits.

5. Lighting - should have some windows and fluorescent full spectrum lighting. Blackout facilities are essential for viewing slides, films, and video.

6. Ventilation - windows that open; a fume exhaust hood (see Hazardous Art Materials and Occupational Safety, p. 94). (See also Kilns and Photographic Darkrooms - p. 95).

7. Electrical - wiring should be 110 and 220 with several electrical outlets on different circuits.

8. Electronic - all appropriate jacks and outlets for electronic media (T.V., video, telephone, intercom, computer and laser disc player).

9. Teaching and research space - library space with work table, gallery/display areas, effective audio-visual viewing space, area for large and small group presentations.

cont....

Rooms and Spaces (cont...)

10. Teacher's office space - for preparation and student-teacher conferences, with windows to the art classroom and telephone.

11. Storage spaces - a lockable walk-in supply room with adjustable or modular storage units; also storage shelves and cupboards beneath counters in classroom. All storage spaces should be lockable in view of community use of work-rooms. Adequate storage space should also be provided for reference materials, works of art, models, slides, and reproductions.

Display Space and Furniture

Display areas should accommodate both two and three-dimensional works of various sizes.

1. Tackboard - should be in all available space.

2. Display shelves - adjustable shelves mounted on brackets.

3. Dropped ceiling hangers - for hanging 3-D works.

4. Outside the art room - display areas (tackboards, locking cabinets) should be located in other parts of the school, especially in hallways and common areas.

Classroom Equipment and Furniture

Sufficient equipment should be provided to allow for independent work on large and small scale projects in a variety of media. It is felt that the following are basic furnishings for a high school art room:

1. Sinks - two peninsulas or island units with clay traps.

2. White board - minimum 1200mm x 1200mm.

3. Bookshelves - open shelves for reference books and textbooks.

4. Counter and cupboard storage - sufficient space for art paper, drawing boards and supplies, projects in progress, audio-visual materials, models, art works and reproductions.

5. Steel cabinets - for storing hazardous materials.

6. Teacher's desk and a demonstration table.

7. Filing cabinet.

8. Art tables - individual student tables with tilted tops or large work tables; with chairs or adjustable stools. Table top easels for use on large work tables.

9. Easels - 15 large easels for painting and presentations.

10. Large paper cutter.

cont'd....

Classroom Equipment and Furniture (cont...)

11. Tool cabinet - with hand tools.

12. Large wall screen.

13. Slide projector/laserdisc player/T.V. monitor/ computer.

14. Ceramic kiln - with automatic shut-off; kiln furniture. Kiln closet with exhaust system is recommended.

15. Garbage cans - metal for waste, plastic (with lids) for storage.

16. Clean-up equipment - broom, mop and pail, sponges, scrub brushes, dustpan.

17. Drying rack - metal.

18. First aid kit/eye wash station.

19. Paper towel dispensers.

20. Workbench with vise.

21. Fire extinguisher/fire blanket.

Further information:

Information on art room planning can be obtained from Planning Facilities for Art Instruction, National Art Education Association, 1916 Association Drive, Reston, Virginia, U.S.A. 22091.

See also Visual Arts and Crafts Facility Planning Alberta Culture, Visual Arts, 3rd Floor, Beaver House, 10158 - 103rd Street, Edmonton, Alberta T5J 0X6.

Art Materials and Tools

Ceramics

Clay - prepared
Canvas or cotton duck for tables
Modelling tools - manufactured, found objects
Glazes
Oxides
Kiln wash
Pyrometric cones
Sponges
Bamboo brushes
Plastic bags
Small plastic squeeze bottles
Plastic pails with lids for glaze storage
Kiln furniture
Rolling pin
Sieve
Heat resistant gloves
Wire clay cutters
Dipping tongs

Collage

Heavy backing sheets - cardboard, wood
White glue
Polymer medium (PVA)
Paste powder
Liquid starch
Found materials (see below)

Display

Cardboard display panels
Pushpins/straight pins
Matte board or heavy tag
Clear acetate sheets (to cover hall displays)
Gummed labels
Tapes - transparent, masking, water

cont....

Art Materials and Tools (cont...)

Drawing

- Drawing boards
- Charcoal sticks
- Conte sticks
- Pencils - hard and soft
- Pencil crayons
- India ink, colored inks
- Straight pens
- Felt tip pens - fine and thick
- Wax crayons
- Collection of found objects
- Quills or reeds
- Oil and chalk pastels
- Magnifying glasses
- Newsprint
- Kraft paper
- Parchment
- Manilla paper
- Transparent paper
- Drawing paper
- Colored papers
- Fingerpaint paper (for felt tip pens)
- Drawing erasers

Fibres

- Cotton (100% - bleached or unbleached)
- Burlap
- Sewing needles and pins
- Weaving needles or bodkins
- Thread
- Yarns, carded wool
- Fabric dyes and fixatives
- Batik wax
- Cotton string
- Fabric shears
- Embroidery hoops or wooden frames
- Plastic funnel
- Simple frame looms
- Iron
- Large plastic bottles
- Large plastic pails
- Measuring spoons and cups
- Rubber gloves
- Brushes, wax applicators/tjantings
- Electric fry pans
- Sewing machine

Found Materials

- Newspapers
- Magazines
- Paper bags, milk cartons
- Cardboard boxes, tubes
- Wood scraps, masonite
- Large and small jars
- Fabric scraps
- Yarn scraps, string, rope and cord
- Toothbrushes
- Old Kitchen Utensils, spools

Found Materials

- Household artifacts
- Styrofoam scraps
- Plastic bags, bottles, pails
- Roll ends from newspaper
- Rags
- Aluminum plates, foil plates
- Egg cartons
- Bones
- Clothing - custumes
- Foam rubber scraps
- Acoustic tile scraps
- Stones
- Shells
- Seed pods
- Dried flowers
- Driftwood
- Bark
- Gourds

Painting

- Brushes - small round
  - medium round
  - large flat
  - bamboo
  - medium flat
  - assorted wide
- Mixing trays, palettes
- Paint - tempera (block/powder/liquid)
  - acrylic
  - watercolor
  - oil
- Primer
- Sponges
- Glass/plastic containers
- Easels
- Paper - manilla
  - cover
  - kraft
  - watercolor
  - Mayfair
- Painting boards (for stretching watercolor paper)
- Painting surfaces
  - canvas, and wood for stretchers
  - masonite
  - found objects

cont'd....

Art Materials and Tools (cont...)

General

Papers - Newsprint
Manilla
Cartridge
Finger paint
Construction
Cover paper
Tissue
Kraft
Butcher roll
Crepe
Cardboard
Manilla tag
Mayfair
Scissors
Straight pins
Thumbtacks
Staples
Nails
String
Glue - white
T-square
Paste
Cellophane tape
Masking tape
Glue sticks
Hammer
Wire cutters
Screwdriver
Handsaw
Pliers
Rulers
Exacto knives
Utility knife
Geometry instruments
Sponges
Hand cleaner
Soap
Paper towels
Detergent
Stain remover
Powdered cleanser

Photography

Inexpensive cameras
Film
Photographic processing chemicals, equipment (note hazards)
Photo paper
(See Kilns and Photographic Darkrooms, p. 95).

Printmaking

Linoleum
Soft wood blocks
Carving tools
Whetstone
Printing inks (water-based)
Silkscreen fabric, frames
Solvents (note hazards)
Inking boards
Brayers
Squeegees
Drying racks or lines
Roller press (positive feed)

Sculpture and Construction

Plaster of Paris
Ceramics materials
Wire
Sandpaper
Wallpaper paste
Newspapers
Modelling clay
Straws
Sticks, toothpicks
Adhesives, tapes, glue
Found materials
Soldering and welding
Tools and materials (note hazards)
Plastic pails
C-Clamps
Files
Chisels, gauges
Mallets, hammers
Sponges
Modelling tools (manufactured and found)
Cardboard boxes, sheets, tubes
String
Knives, utility knives

Art Displays, Art Shows and Art Contests

The opportunity to display art products to classmates, the school, and the community is an important aspect of students' experiences in an art program. Art displays and shows underscore the importance of art-making as visual communication, and allow other members of the school and community to see the results of art room activities. Art contests are contrary to the philosophy and goals of Alberta Education curricula. Displays, shows and contests are different in purpose and can be considered as follows:

- **Art Displays**

Displays of students' art works within the art room and school are important for meeting the goals and objectives of this program. Within the art room, they facilitate the learning of descriptive, analytical and evaluative skills: by displaying and discussing their works in large or small groups, the students develop knowledge of composition and techniques, learn art vocabulary, and learn to identify and describe both problems and successes in their own work and that of others. Art displayed in other parts of the school gives students of the art program a sense that their own art works have value and significance to the school as a whole, and enhances the role of the art program in enriching the general school environment.

It is important, therefore, that the work of each student is displayed as frequently as possible, and that displays are changed on a regular basis to allow all students to have an opportunity to show their work. Reproductions of well-known art works that contain concepts, subjects or techniques similar to those employed in the students' works could be included in displays. Students should have an opportunity to plan and to mount displays, and written explanations should be included when appropriate.

Within the art room, displays offer an opportunity to formalize sessions in Drawings, Compositions and Encounters where visual, analytical and critical skills are to be developed.

- **Art Shows**

Art shows are the appropriate forum for the display of student works in more formal circumstances. Art shows are mounted for special purposes or to accompany special events in the school or community such as concerts, festivals or athletics. They take on some of the characteristics of the equivalent museum or gallery shows, with special displays, catalogues of artists and works, and labels. Collective shows among several schools or a whole school district are a possibility. The essential element of art shows as well as displays is open participation. Although art shows may have criteria of theme, medium, or available space, there is no judgement of students' individual expressive or technical abilities, and a few selected students are not singled out for recognition over and above their classmates.

cont....

- **Art Contests**

Competitions are sometimes organized in conjunction with special school events. Although art contests are often devised by people with intentions of fostering creative activity, they cannot always be justified in educational settings. They may present standards external to school programs and single out a few students for recognition. The policy statements of the Canadian Society for Education Through Art, paraphrased here, explain the reasons why art educators are united in their attitude toward the negative effects of art competitions on students.

- Of the students selected to enter competitions, few are rewarded.

- In competitions, judges not conversant with young people's artistic development and expression may base decisions on adult standards.

- Competitions tend to undermine co-operation and may thereby defeat the purpose of any worthy cause.

- Many students' expectations and sense of worthiness are undermined when a very few are singled out for recognition.

Instead, the C.S.E.A. advocates holding exhibitions or displays that promote the objectives of the total curriculum and allow all students to participate.

- **Competitions for Commissions**

Occasionally, highly motivated and involved high school art students are offered opportunities to plan works of art for clients outside of the art classroom. For example, students might be approached to plan a mural for the school, design a poster for a community group, or make a sculpture or painting for a teacher in the school. This form of transaction is common in the professional art world. If students wish to participate in this kind of competition, teachers have responsibility to discuss the possible disappointments, the requirements of professionalism, and the standards of presentation that the student will encounter. This kind of experience can be valuable for a student contemplating a career in visual art.

- **Portfolio Submissions for Post Secondary Education**

Art 30 students who have a desire to continue post-secondary education in the art field may be expected to develop a portfolio for submission to the selected college or university. This situation does not contravene the previous statements regarding elementary and secondary art education practice. Students preparing portfolios can be encouraged to develop a range of quality art works best displaying their capabilities and interests. These students should also be alerted by their teachers to the possible request by the institution that the student fulfill some specific set of visual exercises.

cont'd....

ART DISPLAYS, ART SHOWS AND ART CONTESTS (cont...)

Students interested in a career in art can expect to have their works reviewed or judged throughout their life. Submissions to galleries or shows, competitions for public commissions and applications for scholarships or grants are a few of the situations that they will encounter.

Careers in Art

The focus of the secondary art program is to develop the competency and interest of students in the expressive and reflective aspects of the visual arts through experiences in a sequential program. Students who have successfully completed this program can be expected to possess visual skills useful to comprehending and articulating visual images. Most students who undertake the program will be likely to continue to enjoy and, through their critical abilities, comprehend the visual arts of their own and others' societies.

As well, some students are likely to consider further post-secondary training and study in the visual arts. The best-known career in art is that of the professional artist, however, this is only one of the many possible art-related careers. In order to consolidate learning experiences and activities into a direction or goal for the future, students may wish to learn about the varieties of careers available. Teachers can assist students, many of whom may possess distinctly different art abilities or interests, to become familiar with possible educational routes available to their chosen careers.

Some of the many careers which utilize art skills and training are:

Antique Restorer
Architect
Animator
Artist's Agent
Art Consultant
Art Editor
Art Designer
Art Director
Art Publisher
Art Salesman
Art Teacher
Art Therapist
Cabinetmaker
Calligrapher
Caricaturist
Ceramicist

Choreographer
Cinematographer
Combat Artist
Commercial Photographer
Color Consultant
Costume Designer
Crafts Counselor
Curator
Design Consultant
Design Engineer
Designer in Glass
Display Artist
Dressmaker
Draftsman
Exhibition Designer
Fabric Designer
Fashion Designer
Fashion Photographer
Field Exhibition Artist
Film Editor
Filmmaker
Foundry Artist
Functional Designer
Furniture Designer
Gallery Director
Gallery Educator
Graphic Designer
Greeting Card Designer
Hair Stylist
Illustrator
Industrial Designer
Industrial Photographer
Interior Designer
Jeweler
Jewelery Designer
Landscape Artist
Layout Artist
Leather Craftsman
Letterer
Lighting Consultant
Lithographer
Make-up Artist
Marine Illustrator
Market Illustrator
Medical Illustrator
Metal Worker
Model Maker
Mock-up Worker
Model Maker
Mock-up Artist
Muralist
Museum Educator
Package Designer
Painter
Paste-up Artist
Photographer
Photography Editor
Photo Retoucher
Political Cartoonist
Printmaker
Printer
Publicity Director
Upholsterer
Researcher
Restorer
Science Designer
Scientific Photography
Sculptor
Serigrapher
Set Designer
Sign Painter
Special Effects Designer

cont....

CAREERS IN ART (cont...)

Stained Glass Designer	T.V. Animator
Stylist	T.V. Background Artist
Teaching Aids Artist	T.V. Director
Technical Illustrator	Visual Aids Artist
Textbook Illustrator	Weaver
Textile Designer	Window Decorator
Tool Designer	Woodcarver

In Alberta, the main schools that provide extended education in art after secondary school are: The Alberta College of Art, Calgary; The University of Alberta, Edmonton; The University of Calgary; The University of Lethbridge, and The Banff Centre School of Fine Arts. Community colleges and technological institutes have programs leading to qualification in arts related careers.

Several resources are available to provide further information about the variety of arts related occupations.

1. Career Education and the Art Teaching Profession (Monograph No. 1), Career Education in the Visual Arts: Representative Programs and Practices (Monograph No. 2) and Careers in the Visual Arts: Options, Training and Employment (Monograph No.3) - 1980.

   Available from National Art Education Association
   1916 Association Drive
   Reston, Virginia,
   U.S.A. 22091

2. Brommer G. and J. Gatto. Careers in Art: An Illustrated Guide. Worcester, Mass.: Davis Publications, 1984. Distributed in Canada by Fitzhenry and Whiteside.

Glossary

The terms in this glossary are defined according to the purposes of this curriculum guide.

Abstraction, Abstract - terms given to forms created by the artist but usually derived from objects observed or experienced. Usually involves simplification or rearrangement, often to the point where the forms seem to have little relationship to things in the natural environment. (See Non-Objective)

Additive - a sculptural term meaning built-up, assembled or attached.

Aesthetic - an appreciation of the beautiful; or, arrangements of the parts of an art work that cause an aesthetic or pleasurable response; the science of sensuous knowledge; theories about the beautiful in the arts.

Alteration - distortion, exaggeration or rearrangement of the parts of a realistic image to create a new form.

Analogous Colors - closely related colors; those that are adjacent to each other on the color wheel (e.g., yellow-orange).

Analytical Drawing - making careful observations of the subject while it is being drawn; thorough attention to particular characteristics of the subject matter.

Analytical Skills - skills that enable students to compare and contrast ideas about art and component parts of art works; skills that enable students to apply concepts they know to problems presented in art activities to arrive at successful solutions and conclusions.

Arch - a structural component of a building that permits the spanning of a greater space between supporting members of the building than could a lintel (see post-lintel).

Armature - a support, usually wire, upon which a sculpture is constructed.

Art Criticism - the practice of forming interpretations and making critical judgements about art.

Artifact - an object made by human effort, usually having some aesthetic properties.

Assemblage - an art technique that utilizes found materials in a combination of collage, painting and sculpture.

Atmospheric Perspective (aerial perspective) - the illusion of deep space produced in 2D works by lightening values, softening contours, reducing value contrasts and neutralizing colors in objects as they recede.

cont....

GLOSSARY (cont...)

Automatic Drawing - spontaneous, expressive drawing that is intended to record impulses and impressions rather than details (see Gesture drawing).

Axial - having, or relating to an axis. In design, a form that is bisected by a straight line.

Barrel Vault - an arched roof fashioned of stone, brick or concrete that is an extension of the round arch.

Bas Relief - low relief sculpture where figures are shallowly carved.

Bimodal - in design, a form that is separated into two distinct, but balanced portions.

Biomorphic - forms whose contours are similar to animal or plant configurations, rather than to mechanical or geometric shapes.

Calligraphic Line - any controlled, flowing, continuous use of line in painting, drawing and sculpture; the character and quality of an artist's linear work.

Cantilever - in architecture, a lintel extending beyond its supports.

Chiaroscuro - the use of value contrasts to demonstrate the effect of "light/dark", or light and shadow.

Closed Forms - forms that appear massive, lacking any significant extension or intrusion of negative space.

Cognition - action or faculty of knowing, perceiving, or conceiving.

Collage - an art form in which the artist creates the image, or a portion of it, by adhering real materials that possess actual textures to the picture plane surface.

Color Scheme - an orderly selection and arrangement of colors whose relationships affect the character of the art product.

Color Wheel - a circular system devised to show the continuous relationships of the primary, secondary and tertiary colors of the spectrum.

Competency - a sufficiency of ability to perform a task, technique, or use a skill in order to express some artistic idea.

Complementary Colors - two colors that are directly opposite each other on the color wheel. A primary color is complementary to a secondary color that is a mixture of the two remaining primaries (e.g., red is complementary to green, which is a mixture of yellow and blue).

cont....

GLOSSARY (cont...)

Components - the elements of a work of art that comprise a composition.

Composition - the act of organizing all of the elements of a work of art into a harmoniously unified whole. Each element used may have particular characteristics that create interest, but must function in such a way that the whole composition is more important than its parts.

Concentration - the clustering or unequal distribution of some elements of a composition within the picture plane.

Concept - a comprehensive idea or generalization that brings diverse elements into some basic relationship.

Conservation - the scientific practice of preserving artifacts in a condition that as closely as possible equals their original state.

Construction - the process of making a sculpture by assembling and joining a wide variety of materials, such as wood, cardboard, plastic, paper and metal.

Continuous Line - slow, analytical drawing that describes the contours and surfaces of an object with a single continuous motion of the drawing instrument (see Contour).

Contour - Contour drawing describes the edges and surfaces of an object in relation to its occupied space (see Continuous Line).

Contrast - emphasize differences or opposition of elements in a work of art.

Criteria - standard by which something (e.g., learning, work of art) is judged.

Critic - someone who interprets and evaluates works of art. Critical skills include abilities to describe the content, meanings, and purposes of art works, and to judge their effectiveness in conveying meaning.

Cross-Hatching - a method of drawing using many overlapping sets of parallel lines to create value differences.

Culture - the values and the relationships between values that inform a society, motivate its behavior, cause it to be functional to the general satisfaction of its members and give the society a distinctive quality and character.

Cursive Line - a drawing technique having a quality similar to that of handwriting.

Curvilinear - stressing the use of curved lines as opposed to rectilinear, which stresses straight lines.

Decorative - the quality that emphasizes the two-dimensional nature of any of the visual elements. Decoration enriches a surface without denying the essential flatness of its nature.

cont....

GLOSSARY (cont...)

Deliberate (media) - media which require a series of actions in order to execute a visual idea (e.g., silkscreen printing).

Delineation - an idea shown by drawing, describing, or portraying in some way; in problem delineation, a process of refining the idea to be expressed.

Design - the planned organization of a composition.

Diorama - a three-dimensional scene within a confined area.

Distortion - a change made by an artist in the size, position or general character of forms based on visual perception, when those forms are organized into a pictorial image.

Dominance - the principle of visual organization that suggests that certain elements should assume more importance than the others in the same compositions. Dominance contributes to unity because one feature is emphasized and other elements are subordinate to it. (See Emphasis)

Element of Design - the basic visual signs as they are combined into components used by the artist to express creative ideas. The basic elements are line, shape, value, texture, space and color.

Emphasis - a principle of design that establishes importance, attention or significance; a relationship between dominant and subordinate elements in composition (see Dominance).

Environmental Design - the planned organization of human environmental spaces; it involves any of: architecture, landscape design, interior design, urban planning, ergonomics, industrial design of fixtures for human spaces.

Ergonomics - the scientific study of the relationship between human beings and their working environment with a view to increasing efficiency.

Exaggeration - extreme emphasis, and/or distortion in composition.

Expression - the special characteristics of form that mark the work of an artist or group of artists. Expressive content is the meaning and significance of art produced by the fusion of form and subject. Strongly emotional or intellectual content in works is called expression.

Figure-Ground - a phrase referring to a spatial relationship between forms and the backgrounds against which they have been placed (see Positive-Negative Space).

cont....

GLOSSARY (cont...)

Focal Point - the centre of interest or attention in a work of art.

Foreground - in 2D works, the space depicted as nearest to the viewer.

Foreshortening - the apparent visual compression or distortion of forms in a composition to indicate depth in space.

Form - a shape or mass; also the total configuration of the shapes, structures, and expressiveness that comprise a work of art.

Formal - an orderly critical system of acquiring information about an art work; works of art based on the principles of art.

Formal Balance - an orderly organization of components in a composition that usually incorporates axial symmetry of forms. (Symmetrical)

Fresco - a process of painting on plaster, either dry or wet, where pigments are mixed with water and then chemically bonded to the plaster; the process was perfected during the Italian Renaissance.

Frottage - an image created by rubbing a soft drawing instrument on the surface of paper which covers a textured surface.

Genre - subject matter that concerns everyday life, domestic scenes, sentimental family relationships, etc.

Geometric Shapes - shapes created by the exact mathematical laws of geometry.

Gesture - action drawing created rapidly and sketchily, capturing the movement or position of a given subject.

Golden Section - (golden mean) refers to proportion in painting, sculpture, and architecture, based on Euclidean theory; the ratio between two unequal parts of a whole when the proportion of the smaller to the larger is equal to the porportion of the larger to the whole.

Graphic Design - a term usually used to describe typographic design, advertising design and the technology of printing.

Grid System - a system of parallel, evenly spaced horizontal and vertical lines to create a graph on an image. The visual information within each block of the graph can then be transferred to a graph of different dimensions to enlarge, reduce or distort the image

Ground - the surface on which an art work is made.

cont....

GLOSSARY (cont...)

Harmony - the unity of all the visual elements of a composition, achieved by repetition of the same or similar elements.

Hatching - a method of drawing using close groupings of short parallel lines.

Horizontal Line - the line that suggests the boundary between earth and sky in a 2D work employing linear perspective. It is often implied rather than deliberately drawn.

Icon (iconography) - an artifact that represents an idea or story of some meaning or value to a group of people

Idealism - a creative viewpoint that emphasizes the mental image or idea by aspiring to a representation of perfection rather than to a representation of actual observed detail.

Illumination (manuscripts) - the art of decorating and elaborating manuscripts from Egyptian times through to the 15th century; (landscape) - a sense of a light source.

Illustration - an art practice that stresses anecdotes or story situations; the content is usually readily recognized and narrative (describes events).

Image - a mentally envisioned thing or plan given concrete appearance through use of an art medium; also, the general appearance of a work.

Impasto - a particularly thick or heavy application of paint.

Informal Balance - an equal distribution of emphasis, or unity, of the various visual elements in a composition without the use of symmetry (see Formal Balance). (Asymmetrical)

Intaglio - a printing process where the printing ink is forced down into the printing surface.

Intensity - the saturation or strength of a color determined by the quality of light reflected from it (the brightness or dullness of a color).

Juxtaposition - the state developed between objects in close spatial relationship.

Kinetic - any work of art that contains moving parts.

Layouts - rough plans for a work of art.

Line - a record of a point moving through space (may be actual or implied); the path made by a tool or instrument as it is drawn across a surface.

cont....

GLOSSARY (cont...)

Linear Perspective - using lines to create the illusion of a three-dimensional space on a two-dimensional surface.

Lintel - in architecture, a crosspiece supported by pillars or walls.

Lithography - the process of printing from a smooth limestone or metal plate on which the image to be printed is ink-receptive and the blank area ink-repellant.

Maquette - a small scale plan of a sculpture.

Mass - the physical bulk of a solid body of material; the appearance of weight or volume of matter in space.

Matte - a smooth but not shiny surface.

Medium, Media - the materials and tools used by the artist to create the visual elements perceived by the viewer of the work of art. Mixed media: art work that uses a combination of media.

Metamorphosis - a series of drawings that describes and records the real or imagined changes in objects over time.

Mobile - a balanced construction with moving parts, suspended from above, and moving freely in the air currents.

Modelling - a sculptural term meaning to shape a pliable material.

Modular Units - basic units of measure taken as a principle for determining the major divisions and proportions of an object, building, figure or site.

Monochrome - a single color or the value variations of a single hue.

Monoprint - the technique whereby it is possible to make only one print by transferring an image from an inked surface to a blank one.

Montage - a composition produced by overlapping, joining and pasting pictures or portions of pictures onto a flat surface.

Mood - a feeling or sense conveyed by an art work as a result of the handling of the elements of the work.

Motif - a visual element or combination of elements that is repeated often enough in a composition to make it the dominant feature of the artist's expression.

Movement - direction and degree of energy implied by art elements in specific pictorial situations; amounts of visual thrust produced by such matters as dimension, placement, and accent.

cont....

GLOSSARY (cont...)

Mural - a wall painting.

Negative Space - the unoccupied or empty space left after the positive shapes have been placed by the artist.

Non-objective - an approach to art in which the visual signs are entirely based on imaginative or technical derivations and not from anything ever seen by the artist. The shapes, their organization, and their treatment by the artist are entirely personalized and consequently not associated by the observer with any previously experienced natural form.

Notation - any form or description of a drawn mark used in making an image.

Obelisks - upright, four-sided pillar commonly covered with hieroglyphic writing recording events.

Objective - art works where surface qualities of subject matter are rendered exactly, without personal interpretation by an artist.

Objective Color - the naturalistic color of an object as seen by the eye (green grass, blue sky, etc.).

Opacity - quality of darkness; not reflecting or transmitting light.

Open Form - a quality of three-dimensional complexity involving considerable extension into space, producing a feeling of openness.

Optical, Optical Perception - a way of seeing in which the mind functions to provide the physical sensation of recognition of form, as opposed to conceptual perception, or the artist's imaginative and interpretive vision.

Organic - pertaining to nature, natural objects, or living things. Organic forms are often irregular and contrasted with geometric or man-made forms.

Orthographic Technique or Projection - a graphic equivalent to seeing all an object's sides as if from a frontal view; no correction for diminishing through distance is given; each side is rendered as if seen head on, and presented on the page so as to give multiple views of the object.

Palette - a board or other device upon which colors are mixed; the group of colors used by an artist in a given composition.

Partial Delineation - a drawn image that is implied by incomplete or non-joining lines or notations.

Pattern - the repetition of elements or the combinations of elements in a regular, systematic organization.

cont....

GLOSSARY (cont...)

Perception - the act of taking notice; recognition of an object, quality or idea through the use of the physical senses and/or mental faculties.

Perspective - a mechanical system of creating the illusion of a three-dimensional space on a two-dimensional surface.

Picture Plane - the actual flat surface on which the artist creates a pictorial image.

Pigment - a color substance, usually powdered, which becomes paint or ink when mixed with a liquid in which it is partially soluble.

Pointillism - the technique of applying dots or tiny strokes of color to the surface so that when seen from a distance the colors are perceived as blended.

Positive Space, Positive Shapes - the enclosed areas that represent the initial selection of shapes planned by the artist.

Pottery - an object made of earthenware and hardened by firing.

Primary Colors - the three basic colors of the spectrum that cannot be produced by mixing pigments; red, yellow, and blue.

Print - to transfer an image from one surface to another.

Proportion - the comparison of elements of a composition to one another in terms of their properties of size, quantity and degree of emphasis.

Proximity - the relative distance or closeness of elements of a composition to one another.

Radial Balance - two or more identical forces distributed around a centre point to create a repetitive equilibrium or balance.

Realism - forms of expression that retain the basic impression of visual reality.

Relief Sculpture - partial projection from the main mass (see Bas-relief).

Repetition - the repeated use of the same visual element a number of times in a composition.

Representation - a manner of expression in which the subject matter is presented so that visual forms are related to actual forms experienced by the viewer.

Restoration - the science of repairing works of art so that they recover, as much as possible, the qualities they possessed when they were first made.

Rhythm - repeated elements of design in a composition that create harmonious movement.

cont....

GLOSSARY (cont...)

Rubbings - images produced by rubbing a soft drawing instrument over paper placed against a textured surface (see Frottage).

Scale - relative or proportional size.

Sculpture, Sculpting - the art of shaping three-dimensional forms.

Secondary Colors - colors created by the equal combination of two primary colors: orange, green and purple.

Serigraphy - printmaking using the silk screen process.

Shade - an area that is differentiated from the space around it because of a defined boundary or a difference in value, color, or texture.

Skeletal - the quality of an object that contains a rigid inner support which determines the outward form of the object.

Space - an extent, measurable or infinite, that can be understood as an area or distance; an empty volume to be occupied by a form, to be used positively or negatively in relation to that form.

Spatial Depth - space possessing thickness as well as length and breadth; a pictorial illusion that suggests recession of forms into space.

Spinal - in design, forms that are connected along a common, central line or axis.

Spontaneous (media) - media that can be used quickly or in a loose manner to show some visual idea (e.g., graphite, watercolor).

Stencil - a thin sheet of paper, metal or plastic film cut to leave openings through which color can be transferred to a surface beneath (positive or negative spaces).

Still-Life - an arrangement of inanimate objects such as fruit, flowers, or pottery used as the subject of a work of art.

Stippling - a technique whereby the working surface is covered with a pattern of dots, which may be abstract or may establish depth, value, or form.

Structure - a building or constructed architectural unit; the compositional relationships in an art work.

Stupas - a hemispherical or cylindrical mound or tower, artificially constructed of earth, brick or stone; often a memoral.

cont....

GLOSSARY (cont...)

Style - a specific character, form, or trend noticeable in art movements, periods of history, or an individual's expressive use of a medium.

Subjective (response) - an approach to creating art that emphasizes personal interpretation and where natural forms may be altered or exaggerated in order to express the artists' point of view.

Subjective Colors - colors chosen by the artist without regard to the natural appearance of the object being portrayed; these colors represent the artist's expression.

Subtractive Sculpture - a sculptural technique meaning carving, cutting or removing portions of the sculptural material.

Surrealism - an artistic style that emphasizes fantasy, imagination and subconscious experience.

Symbol - a form, image, sign or subject standing for something else; often a visible suggestion of something invisible.

Symbolism - some thing or series of things (e.g, sign, form, color, allegorical reference, metaphor) that artists select to represent some secondary quality, idea, thing or occurence; a representation of meaning more profound than that initially observable.

Symmetry - a form of balance made by the repetition of exactly similar parts facing each other or a center.

Synectics - a creative problem-finding and problem-solving method that induces the participant to consider "the familiar in a strange way" and "the strange in a familiar way"; the joining of two or more ideas.

Tableaux - a scene of people interacting in some way that has been chosen by the artist for its visual impact or emotional meaning, e.g., a moment in a play, ceremony or sports event.

Tactile - a quality that refers to the sense of touch.

Technique - the manner and skill with which artists employ their tools and materials to achieve a predetermined expressive effect.

Technology - any practical art utilizing scientific knowledge; a systematic treatment of some situation.

Tempera - a painting technique using pigment mixed with a binder such as egg yolk, glue, starch or casein.

cont....

GLOSSARY (cont...)

Template - shaped flat material used as a pattern to reproduce the outline of that shape many times.

Terra Cotta - low fire red clay, generally unglazed.

Tertiary Colors - colors made by combining a primary and a secondary color, e.g., red-orange.

Texture - the actual or implied tactile quality of a surface, e.g., smooth, rough, soft, hard.

Theme - the meaning of a work of art.

Three-Dimensional - having dimensions of length, width and depth.

Tint - the light values of a color made from the color and varying amounts of white.

Tone - the character of color or value of a surface determined by the amount and quality of light reflected from it.

Translucency - some light transmitted resulting in a glowing or illuminated area; diffused rather than specific form is perceived.

Transmutation - a change of something into another form, kind, or substance.

Transparency - transmitting of some light so that form might be perceived through the surface or substance.

Two-Dimensional - having dimensions of length and width.

Unity - the total effect of a composition that results from the combination of all the works components.

Value - the relative degree of lightness or darkness attributed to an area or color by the amount of light reflected from it.

Vanishing Point - imaginary point used in linear perspective as the convergence of all lines that recede into space.

Volume - any three-dimensional quantity that is bounded or enclosed, whether solid or void.

Wash - watered-down pigment that has a transparent quality over opaque lines and colors.

Watercolor - pigments mixed with water-soluble gum and applied to paper.

cont....

GLOSSARY (cont...)

Woodcut - print made from a wood block into surface of which an image has been carved.

Reference

Elsen, A. Purpose of Art

Ocvirck, O. et al. Art Fundamentals: Theory and Practice 4th ed.

Calgary Public School System Curriculum Outline (7-9).

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Index to Resources

A. Materials Cited in "Resources" Sections of Concept Pages.

A.1 Print Resources: Prescribed, recommended and cited texts and books.

A.2 Visual Resources: Slide form of art works cited.

B. Additional Print Resources: Names, Addresses, and Materials Description.

C. Additional Visual Resources: Names, Addresses and Materials Description.

C.1 Slide Resources

C.2 Art Works and Art Reproductions.

C.3 Audio-visual Materials (loan rental, purchase).

D. Personnel, Centers, Organizations and Institutions: Names, Addresses and Brief Description.

Resources

A. Materials Cited in "Resources" Sections of Concept Pages

A.1 Print resources: prescribed, recommended and cited texts and books.

Albers, J. — Interaction of Color. New Haven: Yale U. Press, 1963.

Arnason, H. H. — History of Modern Art. Englewood Cliffs, N.J.: Prentice-Hall, Inc. New York: Harry N.Abrams, Inc. 1968.

Bennett, B. and Hall C.P. — Discovering Canadian Art: Learning the Language. Scarborough, Ontario: Prentice-Hall, Canada, Inc., 1984.

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Chapman, L. — Approaches to Art in Education. New York: Harcourt Brace Jovanovich, 1978.

Collier, G. Form, Space and Vision. 3rd ed. Toronto: Prentice-Hall, Inc., 1972

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Hanks, K. and Belliston, L. — Rapid Viz. Los Altos, Calif.: Wm. Kaufmann, Inc., 1980.

Harris, A and Nochlin, L — Women Artists, 1500 - 1950

Hobbs, J, — Art in Context. 2nd ed. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1981.

Janson, H.W. — A Basic History of Art. 2nd ed. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1981.

Kaupelis, R. Learning to Draw. New York, N.Y.: Watson-Guptill, 1966.

Laseau, P. Graphic Thinking for Architects and Designers. New York: Van Nostrand Reinhold, 1980.

Note: Teachers should supplement examples in this book with examples of successful female artists and designers.

Life Library of Photography Light and a Film. Time Life Books, N.Y.

MacNair, P., Hoover, A. and Neary, K. The Legacy: Continuing Traditions of Canadian Northwest Coat Indian Art. Victoria, B.C.: Provincial Museum, 1980.

Malins, F. Understanding Painting - The Elements of Composition. Englewood Cliffs: Prentice-Hall, Inc., 1980.

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Nicolaides, K. — The Natural Way to Draw. Boston, Mass.: Houghton Mifflin, 1969.

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Roukes, N. — Art Synectics. Calgary: Juniro Arts Publications, 1982.

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Slatkin, W. — Women Artists in History. Englewood Cliffs, N.J.: Prentice-Hall, 1985.

Tritten, G. — Teaching Color and Form in Secondary School Art. New York: Van Nostrand Reinhold, 1971.

Wong, W. — Principles of Two Dimensional Design. Toronto: Van Nostrand Reinhold, 1972.

cont....

RESOURCES (cont...)

A.2 Visual resources: slide form of art works cited. Packets A, SEVEN, EIGHT, and NINE are listed. The slide packets are available from the: Alberta School Book Branch, 10410 - 121 Street, Edmonton, Alberta T5N 1L2 (Tel. No. 427-2767).

The availability of sufficient and appropriate visual images has been a concern to all art teachers. At present, a laserdisc collection of images is being developed by the Department of Education. This collection will make available an extensive body of images in a permanent record-like format that will be accompanied by a computerized catalogue. The images are being selected from slide collections of art works of all periods throughout time and across cultures. When the development and production of the discs is complete, school boards will be notified. Information about the laserdisc visual encyclopedia and the equipment necessary to play the disc can be obtained by contacting:

M. Lyseng
Learning Resources Officer
West Tower, Devonian Building
11160 - Jasper Avenue
Edmonton, Alberta
T5K 0L2

OR

Rod McConnell
Media and Technology Branch
East Tower, Devonian Building
11160 - Jasper Avenue
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T5K 0L2

An interim visual collection of slides has been developed for use with the junior high art curriculum. Teachers of the senior high programs may find the packets useful as well. Lists of slides for Art 10-20-30 and 21-31 follow the junior high packet lists. However, analysis of the ratio of concepts exemplified by each slide is not available for senior high programs. This collection of slides is subdivided into four packets. In order that teachers can best select the packet, or combination of packets, most useful to their particular program, a description of the slide packet contents follows.

Packet A contains slides that may be used throughout the senior high courses; drawings as well as a variety of two- and three-dimensional works are available.

The remaining three packets (SEVEN, EIGHT and NINE) can be used to demonstrate more specific categories of visual information. Packet SEVEN primarily considers the human figure, packet EIGHT makes available primarily examples of visuals as 'structures', and packet NINE contains equal examples of figural and landscape art works. Canadian and Albertan artists are included in Packet A. The teachers that acquire all four packets are given initial, although by no means definitive, groupings of images with which to teach visual concepts. The senior high packets provide a range of art works from both historical and comtemporary periods.

Information regarding artist, title of work, date and medium can be found in the lists following this introduction.

cont....

PACKET 'A'

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Bellows, G.	'Dempsey and Firpo'	1924	Oil
Brancusi, C.	'Mme Pogany'	1912	Bronze / 44 cm
Bush, J.	'Big A'		Acrylic on Canvas
Calder, A.	'Lobster Trap and Fish Tail'	1939	Steel Wire, Aluminium / 2.59 x 2.9m
Cardinal, D.	'Space Science Centre, Edmonton, Alberta'		Architecture
Carr, Emily	'Blunder Harbour'		Oil on Canvas
Cezanne, P.	'Boy with a Red Vest'	1890-95	Oil
Colville, A.	'Family and Rainstorm'		Tempera on Board
da Vinci, L.	'Five Grotesque Heads'	1490	Pen/Ink
Dali, S.	'Persistence of Memory'	1931	Oil / 24 x 33cm
Danby, K.	'Pancho'		Egg Tempera
Degas, E.	'Dancers Practising at the Bar'	C.1876	30" x 32"
Delacroix, E.	'Tiger Mauling a Wild Horse'	1828	Pencil
Egypt	Old Kingdom 'Khafre-Seated Portrait'	2780-2565 BC	Diorite / 66" high
Fafard, J.	'Calf'		Ceramic Sculpture

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ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Gericault, T.	'Two Horses Cavorting'	1818	Pencil
Goya, F.	'Shootings of May 3, 1808'	1814	Oil / 8'8" x 11'3"
Graves, M.	'Joyous Young Pine'	1944	Painting
Greek	Hellenistic 'Dying Gaul'	197-241 BC	Marble
Greek	Hellenistic 'Nike of Samothrace'	III/II C. BC	Marble / 2.4m
Harris, L.	'Maligne Lake, Jasper Park'		Oil on Canvas
Hopper, E.	'Night Hawks'	1942	Oil / 33" x 60"
Ingres, J.	'Portrait of M. Guillon-Lethiere'	1815	Drawing
Inuit: Dorset Culture	'Antler Fragment Carved with Human Faces'		Caribou Antler
Jackson, A.Y.	'The Red Maple'		Oil on Canvas
Kane, P.	'Indian Encampment on Lake Huron'		Oil on Canvas
Karvonen, P.	'West of Wye'		Twill Tapestry
Krieghoff, C.	'Habitant Farm'		Oil on Canvas
Leger, F.	'The City'	1919	Oil / 2.31 x 2.95cm
Lindisfarne Gospels	English: VIIC. 'St. Matthew'	VII/C	Manuscript
Marisol, E.	'The Family'	1961	Mixed / 82" x 67"
Masson, A.	'Battle of the Fishes'	1927	Pencil, Oil, Sand / 36 x 73cm

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Michelangelo	'Pieta'	1498-99	Marble
Miro, J.	'Self-Portrait'	1937-38	Pencil, Crayon, Oil / 1.46 x .97cm
Monet, C.	Center-detail 'Water Lilies'	1920	Oil
Morre, H.	'Tube Shelter Perspective'	1941	Chalk, Watercolor
Morriseau, N.	'Misshipeshu, Water God and Miskinuk, the Turtle'		Oil on Canvas
Nolde, E.	'The Last Supper'	1909	Oil / 34" x 42"
Odjig, D.			
Parthenon	West Frieze 'Two Horsemen at Canter'	447-32 BC	Relief Marble
Picasso, P.	'Head of a Bull'	1943	Assemblage
Pratt, M.	'Cod Filets on Tinfoil'		Oil on Canvas
Rembrandt	'Cottage Among the Trees'	C.1652	Ink Wash
Rodin, A.	'The Thinker'	C.1876	Bronze / 1.98 x 1.3 x 1.34m
Russell, C. M.	'Medicine Man'		Bronze Sculpture
Seurat, G.	'A Sunday Afternoon at the Grande Jatte'	1885	Oil / 2.06 x 3.05m
Shadbolt, J.	'Prescence After Fire'		Ink and Casein on Paper
Smith, D.	'Hudson River Landscape'	1951	Steel / 1.9m
Stella, F.	'Jasper's Delemma'	1962-63	Alkyd / 6'5" x 12'10"

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Tanguy, Y.	'Furniture of Time'	1939	Oil / 46" x 35"
Toulouse-Lautrec, H.	'Yvette Guilbert'	1893	Pastel
van Gogh, V.	'View of Arles'	1888	Pen
van Gogh, V.	'Night Cafe'	1888	Oil / 29' x 36'
Vermer, J.	'Young Woman with a Water Jug'	C.1665	Oil / 18" x 16"
Watteau, A.	'Head Studies'		
Yates, N.	'Landspace Forty-Four'		Acrylic on Canvas

PACKET SEVEN

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Daumier, H.	'Third Class Carriage'	C.1862	Oil / 26" x 36"
Delacroix, E.	'Armored Figure on Horseback'		Drawing
Dubuffet, J.	'Business Prospers'	1961	Oil / 65" x 87"
Durer, A.	'Knight on Horseback'		Pen / Ink
Easter Island	'Rapa Nui' Statues	XVII/C	Lava
Egypt	Relief 'Herdsmen and Cattle'	2565-2420 BC	Painted, Relief
Ernst, M.	'Horde'	1927	Frottage
Lascaux	'Main Chamber - General View'	15,000-9000 BC	Cave Paintings
Marin, J.	'Lower Manhattan'	1920	Watercolor
Matisse, H.	'The Plumed Hat'	1919	Ink
Michelangelo	'Draped Figure'		Drawing
Munch, E.	'The Scream'		Drawing
Nicholson, B.	'Relief'	1939	Relief
Ravenna, S. Vitale	'Emperor Justinian and His Retinue'	547 AD	Mosaic-apse
Rembrandt	'Self-Portrait'	1627	Pen / Wash
Rembrandt	'Self-Portrait'	1633	Chalk

ARTISTS	TITLE
Rembrandt	'Self-Portrait'
Seurat, G.	'The Stone Breakers'
van Gogh, V.	'the Zouave'

	YEAR	MEDIUM/SIZE
	1657	Pen
	C.1881	Conte
	1888	Ink

PACKET EIGHT

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Albers, A.	'Wall Hanging'	1948	Tapestry
Chartres	'Interior - Upper Nave from West'	1194-1260	Cathedral
da Vinci	'Proportions of the Human Figure'	C.1492	Pen
da Vinci	'Study for the Adoration of the Magi'	C.1480	Pen
Gandi, A.	Barcelona 'Casa Milar.Facade'	1905-1907	Architecture
Ghiberti	East Doors 'Gates of Paradise'	1428-1452	Bronze
Giacommetti, A.	'Walking Quickly under the Rain'	1949	Bronze, 32" long
Gottlieb, A.	'Stained Glass Wall'	1954	Stained Glass
Homer, W.	'Life Boat'	C.1881	Drawing
Johns, J.	'Numbers in Color'	1958-59	Oil
Koepping	'Glasses, Flower Shaped'	1895-96	Artifacts
Mexico	'University of Mexico Library-Facade: O'Gorman, Saavedra, Velasco-Architects'	1952-53	Architecture
Moore, H.	'Reclining Figure Paris UNESCO H.Q.'		Sculpture
Mycenean	'Spouted Jar with Octopi'	1200-1125 BC	Artifacts
Nevelson, L.	'Sky Cathedral'	1958	
Nortre Dame, Paris	'South Side'	1163-1250	Cathedral

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Oldenburg, C.	'Soft Typewriter (Ghost)'	1963	Vinyl, Kapok
Parthenon	'West Facade, North Flank'	448-432 BC	Architecture
Rembrandt	'Christ Carrying the Cross'	1635	Pen / Brush
Riley, B.	'Current'	1964	Synthetic - Resin Paint / 54' x 59"
Soleri, P.	'Arcosanti II, 20th Century		Architectural Plans
Guillard; Lalique; Maison Vevre.	'Three Combs'	C.1900	Artifacts
Tiffany and Co.	'Mantle Set with Egyptian Motifs'	C.1885	Artifacts

PACKET NINE

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Albers, J.	'Homage to the Square "Broad Call"'	1967	Painting
Boccioni, V.	'Unique Forms of Continuity in Space'	1913	Bronze / 101cm
Bruegel, P.	'Return of the Flock'	C.1560	Oil / 1.17 x 1.5m
Cezanne, P.	'Mt. St. Victoire'	1904	Oil
Constable, J.	'Haywain'	1821	Oil / 51" x 74"
Coptic	'Weaving/Textiles II/IIIC - Border Design: Heads, Horses, Birds'	II/III/C	Textile
Corot, J.	'Port of La Rochelle'	1851	Oil / 20" x 28"
David, J.L.	'Oath of the Horatii'	1784	Oil / 14' x 11'
da Vinci	'Mona Lisa'	1503-05	Oil / 30" x 21"
Duchamp, M.	'Nude Descending Staircase'	1912	Oil / 58" x 35"
Gainsborough, T.	'Blue Boy'	1770	Painting
Greek	'Amphora: Big Trainer - Trainer and Runner in Armor'	C.490 BC	Artifact
Llao Dynasty	'Four Seasons: Mural from Ching Ling'	907-1125 AD	Painting
Mantegna, A.	'The Dead Christ'	C.1501	Oil / 26" x 31"
Michelangelo	'Sistine Chapel - The Flood'	1508-12	Fresco

ARTISTS	TITLE	YEAR	MEDIUM/SIZE
Millet, J.	'The Gleaners'	1857	Oil / 33" x 44"
O'Keefe, G.	'Red Hills and Bones'		Oil
Picasso, P.	'Portrait of Ambrose Vollard'	1915	Pencil
Pollock, J.	'Autumn Rhythm'	1950	Oil / 2.67 x 5.26m
Pompeii	'Sacred Lamdscape'	1C BC/1C AD	Wall Painting
Ravenna, S. Vitale	'Vault Decoration - Peacocks, etc.'	52-47 AD	
Renoir, P.A.	'Moulin de a Galette'	1876	Oil / 51" x 68"
Rigaud, H.	'Louis XIV'	1701	Oil / 9'2" x 6'3"
Turner, J.M.W.	'Snow Storm: Steamboat off a Harbor's Mouth'	1842	Oil / .92 x 1.22m
van Gogh, V.	'Cypresses'	1889	Oil
Warhol, A.	'Gold Marilyn Monroe'	1962	Painting
Wyeth, A.	'Christina's World'	1948	Tempera / 32" x 48"

ART 10 SLIDE LIST

Artist	Title
Unknown	- Venus of Willendorf
Salvador Dali	- Persistence of Memory
Henri Matisse	- Lady in Blue
Pablo Picasso	- Girl With a Mirror
Constantin Brancusi	- The Newborn
Joan Miro	- Harlequin's Carnival
Bernini	- St. Theresa Altar
El Greco	- Resurrection
Henry Moore	- Reclining Figure
Unknown	- Chinese Blue and White Jar
Aubrey Beardsley	- Black Cape
Toulouse-Lautrec	- Jane Avril 1899
Lalique	- Jewelry and Mirror
Unknown	- Bayeux Tapestry: Detail
Tiffany	- Vase, 1900
Gustav Klimpt	- Park 1903-10
Georgia O'Keefe	- Black Iris 1926
David Smith	- Voltri VI

Artist	Title
Claes Oldenberg	- Floor Burger
Morris Louis	- Third Element
M. Duchamp	- Nude Descending a Staircase
Umberto Boccioni	- Unique Forms of Continuity
Alexander Calder	- Black Widow
Andy Warhol	- Gold Marilyn Monroe
Roy Lichtenstein	- Modern Painting with Bolt
Fernand Leger	- City, 1919
Robert Delaunay	- The Tower and the Wheel
Williem de Kooning	- Figure in a Landscape No. 2
Gentile da Fabriano	- Adoration of the Magi
Unknown	- Greek Pottery: Amphora
Benozzo Gozzoli	- Medici Chapel Frescoes
Lindisfarne Gospel	- Chi Rho Page
Unknown	- Book of Hours: January
Unknown	- Book of Hours: October
Paul Klee	- Pastorale

cont....

ART 10 SLIDE LIST (cont'd)

Artist	Title
Piet Mondrian	- Composition - White, Black and Red
Aalto	- Lounge Chair
Breuer	- Armchair
Constable	- Wivenhoe Park, Essex
Paul Cezanne	- The Card Players
Rembrandt	- The Night Watch (1642)
Saarinen	- Armchair
Bertoia	- Armchair
Eames	- Armchair
Mies van der Rohe	- Barcelona Chair
Delacroix	- Tiger Mauling a Wild Horse
Matisse	- Plumed Hat (Profile)
Degas	- Dancer (Pastel)
Degas	- Figure Study for Ballet Rehearsal
O'Keefe	- Banana Flower
Matisse	- The Dance 1909

Artist	Title
Le Corbusier	- Ronchamp: Ste. Marie Du Haute
Unknown	- Parthenon: West Facade
Piero della Francesca	- Flagellation of Christ
Giotto	- Ognissanti Madonna
Fra Filippo Lippi	- Madonna and Child Enthroned
Vincent van Gogh	- Sunflowers
Rodin	- The Burghers of Calais

cont....

ART 20 SLIDE LIST

Artist	Title
Leonardo de Vinci	- Caricatures: Two Men (Pen)
Degas	- Studies of Dancers (Charcoal)
Toulouse-Lautrec	- The Barmaid (Pastel)
Klee	- Family Walk (Pen)
Raphael	- Horseman and Two Soldiers
Durer	- Feet of Kneeling Apostle
Picasso	- Card Player (Collage)
Max Ernst	- Loplop Introduces (Frottage)
Braque	- The Clarinet (Collage)
F. Kline	- Painting No. 2, 1954
Salvador Dali	- Crucifixion
Helen Franken Thaler	- Yellow Clearing
Piero della Francesca	- Federigo Da Montefeltro
Hans Holbein	- Portrait of Erasmus
Rubens	- Portrait of Isabella Brandt
Manet	- Portrait of Mme. Manet
Picasso	- Portrait of Gertrude Stein
Matisse	- Portrait of Madame Marisse

Artist	Title
de Kooning	- Marilyn Monroe 1954
Frans Hals	- Portrait of an Officer
Bronzino	- Portrait of Eleanor of Toledo
Giotto	- Fresco: Noli Me Tangere
Brancusi	- Stone Sculpture: The Kiss
Unknown	- Mosaic: Head of Theodora, Ravenna
Unknown	- Tapestry: The Apocalypse
Rodin	- Bronze: The Mighty Hand
Louise Nevelson	- Wood: Two Hanging Columns
Unknown	- Kakiemon Jar: Porcelain
Unknown	- Chinese Bronze Vessel 'Kuei'
Unknown	- Ife: Head, Terra Cotta
Unknown	- Royal Cups (Gold and Enamel)
Unknown	- Egypt: Hatshepsut Ptd. Wood
Duchamp	- Bicycle Wheel

cont....

ART 20 SLIDE LIST (cont'd)

Artist	Title
Matisse	- Jazz: Swimmer in Aquarium
Rembrandt	- Etching: Hundred Guilder Print
Michelangelo	- Creation of Adam
Picasso	- Woman in the Garden
Degas	- Sculpture: Dancer
Michelangelo	- Pieta
Andy Warhol	- Self-Portrait
Judy Chicago	- Three Studies
Picasso	- Interior W. Girl Drawing
Claes Oldenberg	- Monument for Yale: Lipstick
Salvador Dali	- Persistence of Memory
Unknown	- Rose Window, Chartres
Unknown	- Inca: Weft Pattern Weaving
Kollwitz	- Death Takes the Children
Unknown	- Ming Dynasty Vase
Michelangelo	- David

Artist	Title
Durer	- Woodcut: Apocalypse
John Marin	- Watercolor: Pine Tree.Maine
Louise Todd	- Weaving: Yellow Spring
Anonymous	- Album Quilt 1949-50
Margaret Bourke-White	- Photograph: Louiseville Flood
Hokusai	- Fuji Above the Lightning

cont....

ART 30 SLIDE LIST

Artist	Title
van Gogh	- Night Cafe
van Gogh	- Courtyard Garden in St. Remy
van Gogh	- Crows Over the Wheat Field
van Gogh	- van Gogh's Bedroom
Michelangelo	- Holy Family
Unknown	- Last Judgment
Unknown	- God Creating the Sun and Moon
Unknown	- Separation of Light and Dark
Unknown	- Virgin and Child with St. John and Angels
Rembrandt	- Portrait of Jan Six
Unknown	- Night Watch
Unknown	- Portrait of Titus
Unknown	- Supper at Emmaus
Goya	- Shootings of May 3, 1808
Picasso	- Guernica
Gericault	- Raft of the Medusa
George Segal	- The Bus Driver

Artist	Title
Daumier	- Washerwoman
Delacroix	- Liberty Leading the People
Pollock	- Painting 1945
de Kooning	- Woman 1
Franz Kline	- Cardinal 1950
Rothko	- Yellow and Gold
Barnett Newmann	- Vir Heroicus Sublimus
Clyfford Still	- Painting 1948 F
Robert Motherwell	- Elegy to the Spanish Republic, 35
Edouard Manet	- Bar at the Folies Bergere
Claude Monet	- Gare St. Lazare 1877
Claude Monet	- Haystacks, 1891
Renoir	- Moulin de la Galette
Degas	- Dancing Class
Seurat	- La Grande Jatte
Paul Gaugin	- Vision After the Sermon

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ART 30 SLIDE LIST

Artist	Title
van Gogh	- Church at Auvers
Cezanne	- Provence Landscape
David	- Oath of the Horatii
Degas	- Absinthe Drinkers
Daumier	- Third Class Carriage
Goya	- Pest House
Max Beckmann	- Departure
Ben Shahn	- Liberation 1945
Kathe Kollwitz	- Vienna is Dying . . .
van Gogh	- The Potato Eaters
Michelangelo	- Studies for the Libyan Sibyl
Paul Klee	- Full Moon Over the Town
Mantegna	- Madonna and Child
Leonardo da Vinci	- The Deluge
Durer	- The Hare
Henry Moore	- Pink and Green Sleepers
Rembrandt	- A Cottage Among the Trees

Artist	Title
Miro	- The Poetess
Picasso	- Family of Saltim Banques, Study
Picasso	- Family of Saltim Banques
Picasso	- The Old Guitarist
Picasso	- Harlequin, 1915
Josef Albers	- Homage to the Square Silent Call
Hans Hofmann	- The Golden Wall
Marisol	- The Family 1962
Jasper Johns	- Target W. Four Faces
Picasso	- Studio, 1955

cont....

ART 21 SLIDE LIST

Artist	Title
Unknown	- Lascaux: Detail, Engraved Deer
Unknown	- Lascaux: A Bison
Unknown	- General View, Stonehenge
Unknown	- View of Pyramids at Dawn
Unknown	- Khufu, Model
Unknown	- Venus of Willendorf
Unknown	- Mother and Child - Haida
Unknown	- Ceremonial Effigy Mask, Eskimo
Unknown	- War Helmet, Tlingit
Unknown	- Pyramid of Zoser
Unknown	- Ishtar Gate
Unknown	- Mycenae Lion Gate
Unknown	- Mycenae Grave Circle
Unknown	- Rahotep and Nofret
Unknown	- Tutankhamen's Mask
Unknown	- Workers in Papyrus Thicket

Artist	Title
Unknown	- Catching Birds
Unknown	- Hunting Scene
Michelangelo	- Tomb of Giuliano De'Medici
Michelangelo	- Right Side of Moses - From Julius II
Picasso	- Guernica
Michelangelo	- Creation of Adam
Piero della Francesca	- Resurrection of Christ
Unknown	- Athens - Erechtheon
Unknown	- Parthenon West Facade from Below
Unknown	- Rome - Arch of Titus
Unknown	- Rome - Detail: Arch of Titus
Unknown	- Rome - Colosseum
Unknown	- Rome - Trojan's Column
Unknown	- Rome - Pantheon Interior
Carlo Maderno	- Facade of St. Peter's
Unknown	- Chartres: West Facade

cont....

ART 21 SLIDE LIST

Artist	Title
Unknown	- Versailles: Galerie Des Glaces
Unknown	- Florence: Palazzo Vecchio
Unknown	- Salisbury Cathedral Facade
Unknown	- Khafre: Seated Portrait
Unknown	- Anubis, Jackal-Headed God
Unknown	- Sumerian, Goat in Thicket
Unknown	- Assurnasirpal II Shooting Lion
Unknown	- Assurnasirpal Slaying Lion
Unknown	- Kouros
Unknown	- Hermes and Dionysus
Unknown	- Arch of Titus. Spoils of Jerusalem
Unknown	- Marcus Aurelius, Equestrian
Donatello	- David
Donatello	- Gattemalatta
Donatello	- St. Mark
Michelangelo	- David

Artist	Title
Unknown	- Royal Portal, Chartres
Unknown	- Chartres, South Tympanum
Rodin	- Burghers of Calais
Exekis	- Achilles and Ajax at Draughts
Unknown	- Villa of Mysteries: Dionysiac
Giotto	- Lamentation
Lorenzetti	- Market Scene: Good Government
Gericault	- Raft of the Medusa
David	- Death of Socrates
David	- Death of Marat
David	- Oath of the Horatii
Altdorfer	- Battle of Issus
Millet	- The Gleaners
Toulouse-Lautrec	- At the Moulin Rouge
Kollwitz	- Death Takes the Children
Rembrandt	- Aristotle Before Homer
Goya	- Shootings of May 3, 1808

cont....

ART 21 SLIDE LIST

Artist	Title
Unknown	- Tres Riches Heures: May: A Cavalcade
Durer	- Apocalypse (Woodcut)
Holbein	- Portrait of Henry VIII
Botticelli	- Dante's Inferno: Canto XV
Unknown	- Utrecht Psalter PS. 73
Unknown	- EBO Gospels
Unknown	- Ravenna: Emperor Justinian
Delacroix	- Dante and Virgil in Hell
Courbet	- Funeral at Ornans
Daumier	- The Washerwoman
van Gogh	- The Starry Night
Constable	- The Haywain
Warhol	- Gold Marilyn Monroe 1962
Vasarely	- Kalota 1963
Cellini	- Saltcellar of Francis I
Unknown	- Purse Lid: Sutton Hoo
Daumier	- Rue Transnonain

Artist	Title
Dore	- Inferno XXXI Level of Traitors
Unknown	- Book of Durrow
Unknown	- Echternach Gospels
Unknown	- Lindisfarne Gospels
Claesz	- Still-Life
Mondrian	- Composition in White, Black and Red
Picasso	- Harlequin 1915
Matisse	- Goldfish and Sculpture 1911
Picasso	- Magolie 1911-12
Klee	- Twittering Machine 1922
Dali	- Persistence of Memory
Leger	- The City 1919
Calder	- Constellation with Red Object
Stella	- Jasper's Dilemma
Chagall	- Birthday 1915
Cezanne	- Still-Life with Apples
Braque	- Oval Still-Life: The Violin

ART 31 SLIDE LIST

Artist	Title
Helen Frankenthaler	- Jacob's Ladder
Morris Louis	- Alpha Tau 1961
Kenneth Noland	- And Again 1964
Frank Stella	- Takht-1-Sulayman 1, 1967
Josef Albers	- Homage to the Square: Silent Call
Mark Rothko	- White and Greens in Blue, 1957
Wassily Kandinsky	- Church at Murnau 1929
Pablo Picasso	- Guernica
Pablo Picasso	- Three Musicians
Pablo Picasso	- Night Fishing at Antibes
Pablo Picasso	- Studio with Plaster Head
Pablo Picasso	- Pierrot, 1918
Pablo Picasso	- Acrobat's Family with Monkey
Pablo Picasso	- Girl Before a Mirror
Pablo Picasso	- Woman in the Garden
Constantin Brancusi	- Mademoiselle Pogany
Edward Manet	- Ball Scene 1873

Artist	Title
Jackson Pollock	- Full Fathom Five
Salvador Dali	- Persistence of Memory
Marc Chagall	- I and the Village
Piet Mondrian	- Broadway Boogie-Woogie
Fernand Leger	- Three Women
Joan Miro	- The Harlequin's Carnival
Jean Arp	- Leaves and Novels
Jean Arp	- Human Lunar Spectral
Rene Magritte	- The Promenades of Euclid
Giorgio de Chirico	- The Nostalgia of the Infinite
Rene Magritte	- Castle of the Pyrenees
George Segal	- The Bus Driver
Claes Oldenburg	- Floor Cake
Andy Warhol	- Gold Marilyn Monroe
Franz Kline	- Accent Grave
Jamie Wyeth	- Christine's World
Victor Vasarely	- Kalota

cont....

ART 31 SLIDE LIST

Artist	Title
Hans Hoffmann	- Golden Wall, 1961
Robert Delaunay	- Sun Disks
Roy Lichtenstein	- Drowning Girl
Henry Moore	- Family Group
David Smith	- Australia
Anthony Caro	- Source
Alexander Calder	- Lobster Trap and Fishtail
Louise Nevelson	- Sky Cathedral
Bridget Riley	- Current
Henri Matisse	- Dance
Henri Matisse	- The Open Window, Collioure
Claude Monet	- Water Lilies (centre) 1920
Paul Cezanne	- L'Estaque
Paul Gaugin	- The Moon and the Earth
Vincent van Gogh	- Starry Night
Georges Braque	- Still-Life with Pitchers
Juan Gris	- Guitar, Bottle and Glass

Artist	Title
Amedeo Modigliani	- Anna Sborowska
Max Ernst	- Elephant of the Celebes
Paul Klee	- Spring is Coming
Robert Smithson	- Learning Strate
Christo	- Museum of Modern Art Packaged
Kathe Kollwitz	- Vienna is Dying
Henri Matisse	- Jazz: The Circus 1947
Toulouse-Lautrec	- Jane Avril (Poster) 1899
Miriam Shapiro	- Flying Carpet 1972
Christopher Pratt	- Shop on an Island
Alex Colville	- Church and Horse
Jack Shadbolt	- Winter Poppies
William Kurelek	- The Ukrainian Pioneer #6
Gordon Smith	- West Coast M-5
Takao Tanabe	-)
Norman Yates	-)
Robert Sinclair	-) Alberta Landscapes -
A.C. Leighton	-) one example of each
Illingworth Kerr	-) artist.
Barbara Ballachey	-)
Maureen Enns	-)

RESOURCES (cont...)

B. **Additional Print Resources**: NAMES, ADDRESSES AND MATERIALS DESCRIPTION.

- Alberta Education Regional Offices

Grande Prairie	5th Floor, Nordic Court 10014 - 99 Street Grande Prairie, Alberta T8V 3N4 Tel.: 538-5130
Edmonton	3rd Floor, Edwards Building 10053 - 111 Street Edmonton, Alberta T5K 2H8 Tel.: 427-2952
Red Deer	4th Floor Royal Trust Building 4814 Ross Street Red Deer, Alberta T4N 1X4 Tel.: 340-5262
Calgary	Room 1200 Rocky Mountain Plaza 615 MacLeod Trail, S.E. Calgary, Alberta T2G 4T8 Tel.: 297-6353
Lethbridge	Provincial Building 200 - 5 Avenue, South Bag Service 3014 Lethbridge, Alberta T1J 4C7 Tel.: 329-5243

- Consultants.
- Library availability.
- Booklet listing available.

. Alberta Culture
Information Centre
Visual Arts
3rd Floor, 10158 - 103 Street
Edmonton, Alberta
T5J 0X6 Tel.: 427-2031

All publications are available free of charge.
Phone or write for Art Information Catalogue.

- Technical manuals, bibliographies and materials and supplies list for eleven media.
- Information on Arts Administration, Art Marketing, Art Promotion, Exhibition and Display.
- Descriptions of various components of Alberta Culture, as well as the programs offered.
- Visual Arts Newsletter is published bimonthly.

. A.T.A. Fine Arts Council
Barnett House
11010 - 142 Street
Edmonton, Alberta
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- Provincial organization.
- Membership and subscription information.
- Visual and print bibliographies.
- Publication: FINE.
- In-services.
- Personnel Resources File.

cont....

RESOURCES (cont...)

- Canadian Society for Education Through Art (C.S.E.A.)
  National Office
  3186 Newbound Court
  Malton, Ontario
  L4T 1R9

  - National organization.
  - Membership and subscription information listings.
  - Pamphlets and article reprints.
  - Publications: Annual Journal; Canadian Review of Art Education Research

- Catalogues of Canadian artists include information about: biographies, works of art, exhibitions, sales, reproduction availability. Information is available for historic and contemporary artists, and encompasses artists from all geographic regions in Canada.

  Some catalogues listed in library holdings:

  - A Directory of Eskimo Artists in Sculpture and Prints.
  - Alberta Art Foundation - Inventory of Art-Works Acquired to February, 1980.
  - Catalogue of the Library of the National Gallery of Canada.
  - Art Gallery of Ontario - the Canadian Collection.
  - Canadian Art at Auction.

. Center for Occupational Hazards
5 Beekman Street
New York, N.Y. 10038
(212-227-6220)

- Organization to gather and dispense information about hazardous materials.
- Subscription information.
- Extensive publication list available.
- Newsletter: Art Hazards News.
- Workshop, research updates.

. National Art Education Association (N.A.E.A.)
1916 Association Drive
Reston, Virginia 22091

- International organization.
- Membership and subscription information.
- Pamphlets and research listings.
- Publications: Art Education, Studies in Art Education, Visual Arts Newsletter.

. Provincial Museum of Alberta
12845 - 102 Avenue
Edmonton, Alberta
T5N 0M6

Attn.: Museum Bookshop.
(403-427-1765)

- Profiles is a binder style book containing histories and source list readings for 50 ethnic groups in Alberta; very reasonable cost.

cont....

RESOURCES (cont...)

- See "Hazardous Art Materials and Occupational Safety" for further listing of books, pamphlets, and posters that are available.

- Material is available also through media centers or teacher resource centers within each school board.

- Over 200 art periodicals are listed in various library indexes.

C. **Additional Visual Resources** NAMES, ADDRESSES AND MATERIALS DESCRIPTION.

C.1 Slide Resources.

. Alberta Culture
Information Centre
Visual Arts
3rd Floor, 10158 - 103 Street
Edmonton, Alberta
T5J 0X6
(403-427-2031)

- An inventory of slides is available from the Child Art Education program.

. American Slide Library
Color Slide Co. Inc.
P.O. Box 5810
Grand Central Station
New York, N.Y. 10017

- Catalogues available.
- Individual slides and sets.

. Art Gallery of Ontario
317 Dundas Street West
Toronto, Ontario
M5T 1G4

- Individual slides of Canadian artists.

cont....

RESOURCES (cont...)

- Glenbow Museum
  130 - 9th Avenue S.E.
  Calgary, Alberta
  T2G 0P3

  - 'Photographic Price List: Curatorial' is available.
  - Individual slides.

- National Gallery of Canada Slide Sales
  Publications Dept.
  Ottawa, Ontario
  K1A 0M8

  - Catalogue available of Canadian Artists' works; individual slides and sets.

- National Gallery of Art
  Extension Service
  Washington, D.C. 20565

  - Catalogue of slide programs is available.

- National Women's Art Museum
  Washington, D.C.

  - Opening in 1986, will have slide, audio-visual information available.

. Rosenthal Slide Library
Rosenthal Art Slides
5456 South Ridgewood Court
Chicago, Illinois 60615

- Catalogues available.
- Individual slides and sets.
- Includes all areas of the visual arts.

. Sandak, Inc.
180 Harvard Avenue
Stamford, Conn. 06902

- Catalogues of major museum collections, modern and historic.
- Individual slides and sets.

C.2 Art Works and Art Reproductions.

. Alberta Education Regional Offices

(see addresses listed in Additional Print Resources, Section B.)

- Alberta artists' works available for classroom display.

cont....

RESOURCES (cont...)

- Alberta Art Foundation
  Information Centre
  Visual Arts
  3rd Floor, 10158 - 103 Street
  Edmonton, Alberta
  T5J 0X6
  (403-427-2031)

  - Brochures and catalogues of exhibitions held.

- Alberta Culture
  Information Centre
  Visual Arts
  3rd Floor, 10158 - 103 Street
  Edmonton, Alberta
  T5J 0X6
  (403-427-2031)

  - Catalogues of exhibitions held.
  - Posters of past exhibitions, as well as art education promotion.

- Glenbow Museum
  130 - 9th Avenue S.E.
  Calgary, Alberta
  T2G 0P3

  - 'Photographic Price List: Curatorial' is available.
  - Black and white, and color photographs and enlargements.

- Harper and Row Media Department
  10 East 53rd Street
  New York, New York 10022

  - Rental/purchase of four slide sets about women artists.

- Metropolitan Museum of Art
  82 Street - 5th Avenue
  New York, New York 10028

  - Slides, sound/slide sets, prints, posters, publications, recordings, postcards, 3-D reproductions.
  - Catalogues available.

- Museum of Modern Art
  11 West 53 Street
  New York, New York 10019

  - Reproductions available.

- N.A.E.A.
  1916 Association Drive
  Reston, Virginia 22091

  - Lists of visual material available.

- National Gallery of Art
  Washington, D.C. 20565

  - Catalogues of reproductions available.

cont....

RESOURCES (cont...)

- Postcards are available from many art galleries and museums. Packets of postcards can be used as a teaching aid - one concept rendered by several artists, or, the development of an artist's style - for individual student or small group study.

- Reinhold Visual Series
  Van Nostrand Reinhold Ltd.
  1410 Birchmount Road
  Scarborough, Ontario
  M1P 2E7

  - Reproductions; black and white and color.

C3. Audio-visual materials (loan rental, purchase).

- ACCESS
  Media Resource Center
  16930 - 114 Avenue
  Edmonton, Alberta
  T5M 3S2
  (403-451-3160)

  - Catalogue available in most schools.
  - Videotape material.

- Alberta Agriculture
  Film Library
  7000 - 113 St.
  Edmonton, Alberta
  T6H 5T6

  - Catalogue available.
  - Loan.
  - Films on quilting, fabric work batik, block printing.

- Alberta Culture
  (see address listed previously)

  - An inventory of films, slides and kits available from the Child Art Education program.

- Alberta Cultural Heritage Foundation
  202, 9924 - 106 Street
  Edmonton, Alberta
  T5K 1C4

  - Alberta People Kit - multimedia, cultural heritage awareness education kit for upper elementary classes.
  - Purchase.

cont....

RESOURCES (cont...)

- Canadian Film Institute
  Film Library
  #204 - 211 Watline Avenue
  Mississauga, Ontario
  L4Z 1P3

  - Catalogue charge of $15.00.
  - Rental rates approx. $2.00 a minute, decreasing with length of film.

- Films from Consulates and Embassies may be useful.

- Films on Art (book)
  Watson - Guptill Publications.

  - Composite listing of art films and sources.

- Institutional media centers - universities, technical schools, art colleges.

- McIntyre Educational Media Ltd.
  86 St. Regis Crescent North
  Downsview, Ontario

  - Catalogues available.
  - Purchase, film strips and cassettes.
  - Individual filmstrips, and series.

- Media centers or teacher resource centers in school boards may have film listings.

- National Film Board
  Main Flr. 222-1 St., S.E.
  Calgary, Alberta
  T2P 3C3

  Centennial Bldg.,
  10031 - 103 Ave.
  Edmonton, Alberta
  T5J 0G9

  - Catalogue available.
  - 16mm films.
  - Loan.

- Sandak, Inc.
  180, Harvard Avenue
  Stamford, Connecticut 06902

  - Catalogues available.
  - Filmstrips and cassettes available individually or in series.
  - Purchase.

- The Center for the Humanities, Inc.
  2 Holland Avenue
  White Plains,
  N.Y. 10603

  - Filmstrip and slide programs.
  - Purchase.

- Time-Life Video
  Time-Life Building
  Chicago, Illinois 60111

  - Catalogue available.
  - Rental.

cont....

RESOURCES (cont...)

D. **Personnel, Centers, Organizations and Institutions**: NAMES, ADDRESSES AND BRIEF DESCRIPTION.

- Alberta Association of Multicultural Education
  c/o Treasurer, AAME
  Edmonton Public School Board
  10010 - 107A Avenue
  Edmonton, Alberta
  T5H 0Z8

  - Organization to support multicultural and intercultural education in schools and communities.

- Alberta College of Art
  1301 - 16 Avenue N.W.
  Calgary, Alberta
  (403-284-8651)

  - Gallery.
  - Open house tours.

- Alberta Culture

  (see address previously listed)

  Cultural Heritage: Programs and Services

  - Funding program, multicultural training program.
  - Information program: a directory of ethnocultural groups in Alberta; Heritage, a magazine; Update, a newsletter; Profiles, a book.

- Alberta Culture Library is on the 11th floor, CN Tower, in Edmonton.

. Alberta Culture

(see address previously listed)

- Workshops, programs, services are listed in the Art Information Catalogue, 1983-84.
- Beaver House Gallery shows works of amateur, student and professional artists.

. Art Consultants
Alberta Education Regional Offices

(see addresses in Additional Print Resources section)

. ATA Fine Arts Council
Barnett House
11010 - 142 Street
Edmonton, Alberta
T5N 2R1

- Membership and newsletter.
- Regional conferences.

cont....

RESOURCES (cont...)

- Alberta Vocational Center
  Grouard, Alberta.

  - Native craft museum.
  - Workshops on clothing, artifacts using e.g., Northern Cree, Black Foot, Alquoquin.

- Banff Center
  School of Fine Arts
  Visual Arts Department
  P.O. Box 1020
  Banff, Alberta
  T0L 0C0

  - Gallery; winter/summer courses.
  - Coordinates 'Artists in the Schools' program.

- Canadian Society for Education Through Art
  National Office
  3186 Newbound Court
  Malton, Ontario
  L4T 1R9

  - Membership and newsletters.
  - National conferences.

- Cultural Centers
  (provided by Glenbow)

- Continuing education departments of community colleges and universities offer a variety of art courses.

- Edmonton Art Gallery
  Art Education Department
  2 Sir Winston Churchill Square
  Edmonton, Alberta
  T5J 2C1
  (403-422-6223)

  - Exhibitions, art classes, lectures, gallery magazine, research library, slide library.

- Glenbow Museum
  Education Department
  130 - 9 Ave., S.E.
  Calgary, Alberta
  T2G 0P3

  - Historical and contemporary exhibitions.
  - Lectures, films, education and extension programs, Glenbow magazine, library, archives, artists' biographies.

- Leighton Center for Arts and Crafts
  Box 38
  Midnapore, Alberta

  - Courses in a variety of media.

cont....

RESOURCES (cont...)

- Multicultural Heritage Centre
  5411 - 51 Street
  Box 908
  Stony Plain, Alberta
  T0E 2G0
  (403-963-2777)

  - Gallery, heritage program, art courses, craft courses, a museum, and artists' biographies.

- Muttart Gallery
  2nd Floor, 1221 - 2 St., S.W.
  Calgary, Alberta
  T2R 0W5

  - Galleries.
  - Community exhibitions.

- National Art Education Association
  1916 Association Dr.
  Reston, Virginia 22091

  - Membership and newsletters.
  - Regional and international conferences.

- Prairie Art Gallery
  9809 - 102 Street
  Grande Prairie, Alberta
  T8V 2V1

  - Galleries.
  - Workshops and classes.

- Provincial Museum of Alberta
  12845 - 102 Avenue
  Edmonton, Avenue
  T5N 0M6
  (403-427-1730)

  - Art exhibitions emphasize documentary or historical representational works.
  - Art education classes.

- Red Deer and District Museum
  Box 762
  Red Deer, Alberta
  T4N 5H2
  (403-343-6844)

  - Historical works in all media, lectures, films and other events in connection with its exhibitions.

- Southern Alberta Art Gallery
  601 - 3rd Avenue, S.
  Lethbridge, Alberta
  T1J 0H4

  - Galleries
  - Classes and workshop.

Index to Hazardous Art Materials and Occupational Safety

A. **Resources**

A.1 Listing of Contacts for Resources.

B. **Occupational Safety**

B.1 Ventilation

B.2 Noise

B.3 Illumination

B.4 Storage

B.5 Kilns and Photographic Darkrooms

B.6 Asbestos

B.7 Behavioral Precautions

C. **Art Materials**

C.1 Dangerous Art Materials

C.2 Hazardous Art Materials

C.3 Glossary

Hazardous Art Materials and Occupational Safety

A. RESOURCES

A.1 Listing of Contacts for Resources

. Ad Hoc Committee on Health Hazard in Arts and Crafts Materials.

Health Protection Branch of Health and Welfare Canada, Ottawa, Ontario.

Contact: John Harrison,
Secretary, at 613-990-8861.

- Committee formed in September, 1982; main intent is to increase public awareness of hazards.
- Large wall charts are available regarding hazards in: Pottery and Ceramics, Dyes and Fibers, Jewellery, Photography and Painting and Printmaking. Available free of charge.

Write to:
Health and Welfare Canada
5th floor, Brooke Claxton Bldg.
Ottawa, Canada
K1A 0K9

. Alberta Workers' Health, Safety and Compensation. Design Criteria for the Control of Health Hazards in Schools.

- Booklet contains bibliography.
- Concerns ventilation, noise, illumination, sprayed-on asbestos.
- "Woodworking Exhaust Ventilation Requirements for Industrial Art Areas in Alberta High Schools" available.
- "The Control of Fibre Released from Sprayed-On Asbestos Containing Surfaces" available.

Copies of booklets and additional information available at the following addresses:

Occupational Health Branch
9321 - 48 St.
Edmonton, Alberta
T6B 2R4
(403)427-4792

2nd Floor
1021 - 10th Ave., S.W.
Calgary, Alberta
T2R 2B7
(403)261-2188

. Alberta Lung Association
10618 - 124 St.
Edmonton, Alberta
T5N 3X4
(403)482-6527

- Will provide information on acquiring Health Hazards in Arts and Crafts, published by the Ontario Lung Association), 16 pp.
- Also will provide information on acquiring Health Hazards in the Arts, a bulletin published by the American Lung Association.
- May be a fee, depending on number of copies requested.

cont....

- The Arts and Crafts Material Institute, Inc. (formerly Crayon, Watercolor and Craft Institute).
  715 Boylston Street
  Boston, M.A. 02116

  - Will send list of approved, safe (not toxic or injurious) art materials.
  - Look for seals of approval (AP) or (CP) on materials used in classroom.

- Art Team Program Development. Safety Bulletin Art Education.

  Calgary Board of Education, Calgary, Alberta, 1979.

- B.C.A.T.A. Art Hazards in the Classroom: A Learning Conditions Draft. Vol. 21 No. 2, March 1981.

  - Contents compiled from Art Hazards Newsletter to 1981; 21 pages.
  - Includes resources list.
  - Draft has since been approved by B.C. Federation.
  - Copies can be obtained by sending $2.00 (cheque or money order payable to B.C. Art Teacher's Association) to:
    Bob King
    c/0 Port Moody Senior Secondary
    300 Albert Street
    Port Moody, B.C.
    V3H 2M5

- Bingham, Eula, ed. Women and the Workplace.

  - Health problems, including suggestions for improvements in the workplace for both men and women.

  Available from:
  Society for Occupational and Environmental Health,
  1714 Massachusetts Avenue, N.W.
  Washington, D.C. 20036

- Carnow, Bernard. Health Hazards in the Arts and Crafts.

  Available from:
  Hazards in the Arts,
  Box 110, Route 1
  Steuben, Wisconsin 54657

- Center for Occupational Hazards, Inc.
  5 Beekman St.
  New York, New York 10038
  (212)227-6220

  - Art Hazards Newsletter is published monthly. Contains research findings, publications lists, Calendar of Events, subscription fee.
  - C.O.H. will also answer any written or telephoned inquiries regarding art materials or occupational conditions.
  - Send a self-addressed, stamped envelope to C.O.H. to receive publications list.

cont....

- C.O.H. Art Hazards Courses.

  - Interest in sponsoring courses on health hazards can be directed to information center of C.O.H.

  Center for Occupational Hazards, Inc.
  5 Beekman St.
  New York, New York 10038
  (212)227-6220

- Government of Alberta. Health and Safety in Printmaking.

  - Highly recommended manual, approximately 100 pages; nominal charge.

  Queen's Printer Building
  11510 - Kingsway Avenue
  Edmonton, Alberta
  T5G 2Y5

- Harrison, John
  Toxicological Advisor
  Environmental and Occupational
  Toxicology Division
  Health and Welfare Canada
  Ottawa, Ontario
  K1A 0L2
  (613)990-8861

  - Mr. Harrison will make available reprints of his article 'Art Smart'; (Living

Safety, Winter 1983/84) which contains a list of further contact associations.
- Can provide 'Guidelines on toxic and hazardous chemicals, used in educational institutions' for $1.50.
- Very good information on classification, criteria, storage compatibility, and disposal, as well as bibliography.

. McCann, Michael. Artist Beware: The Hazards and Precautions in Working with Art and Craft Materials. New York: Watson-Guptill, 1979.

- Also available through the publications list of the:
  Center for Occupational Hazards, Inc.
  5 Beekman St.
  New York, New York 10038

. Ontario Crafts Council.
"A Personal Risk Assessment for Craftsmen and Artists."
"Crafts and Hazards to Health."
An A/V kit also available.

Contact:
Ontario Ontario Crafts Council
346 Dunlar Street West
Toronto, Ontario
M5T 1G5
(416)977-3557

cont....

- Peltz, P. and Rossol, M.
  "Children's Art Materials Can Be Toxic."

  - 7 page data sheet; $1.40.
  - Also available through the publications lists of the C.O.H.

  Center for Occupational Hazards
  5 Beekman St.
  New York, New York 10038

- Siedlicki, Jerome. The Silent Enemy: Potential Health Hazards in the Arts and Their Control.

  Available from:
  Artists Equity Association
  2813 Alber Marle St., N.W.
  Washington, D.C. 20008

B. Occupational Safety

Information in this section was derived primarily from Design Criteria for the Control of Health Hazards in Schools published by the Occupational Hygiene Branch of Alberta. Teachers are encouraged to gather information from primary sources such as the one cited, as the following information has been summarized and is not definitive.

B.1 Ventilation

Two types of ventilation - general and local - assist in the control of contaminants such as dust, odors, gases, vapors, mists, and hot air. Ventilation also helps to control heat build-up and humidity. An open window is not considered sufficient in providing the air circulation essential for the prevention of health hazards or risks. In some contaminant cases, opening windows will only further human contact with the hazardous material.

General ventilation refers to the number of times an hour the air for the whole facility is changed. Three to six air changes per hour are recommended for fine arts rooms. Also recommended is the maintenance of a slight negative air pressure in the room. Negative air pressure would assist in containing contaminants in the fine arts area, rather than spreading these throughout the school. However, general ventilation is not capable of reducing contaminant hazards associated with particular art materials that may be used.

cont....

Local ventilation refers to systems designed specifically for contaminant situations. For example, cross draft systems, hoods closed on three sides and backdrafted vents are systems that effectively control contaminants in silk-screening, making plastics, or etching, respectively. Local ventilation must be selected and installed by ventilation experts. Teachers are encouraged to seek further information when ventilation problems are mentioned in the section on 'Hazardous Art Materials'.

The benefits of local ventilation are described in many occupational health manuals. Briefly, the students suffer less exposure to a contaminant, if the proper system is used, than they will suffer with only general ventilation. Also, aside from installation costs, local ventilation is cheaper and more efficient to use than general ventilation as it is specific to the problem, and can be shut off when not required.

B.2 Noise

Excessive noise in any room in the school may cause problems. Make sure students are wearing industrial ear protection when using woodworking or metal working equipment for extended periods of time.

B.3 Illumination

Full spectrum fluorescent tubes combined with natural lighting is considered an optimum lighting situation. Be advised that fluorescent tubes lose 20% to 40% of their efficiency after 18 to 24 months of use. Changing tubes reduces the amount of fuzzy noise that can be heard when fluorescent lighting is used.

B.4 Storage

Limit storage of volatile materials in the art room to a few days. Store the remainder of the volatile or hazardous materials in a central storage area, first ensuring that the exhaust system will remove air to the outside of the building. Specific volume exhaust is recommended at .005 m^3/s per m^2 floor area.

B.5 Kilns and Photographic Darkrooms

Kilns must operate in a room separate from the art room and must be vented to the outside by a canopy hood providing a capture velocity of .25 m/s (50 fpm).

Photographic darkrooms should also be vented to the outside of the building. Black and white developing requires ten air changes per hour. A capture velocity of .75 m^2/s per square meter of surface area of trays is necessary in color developing.

Teachers must inform themselves of the proper use and maintenance of their kilns, as well as the appropriate and conscientious behavior necessary when in a dark room, by consulting primary resources.

B.6 Asbestos

Asbestos may have been used in fireproofing, insulation, acoustic and decorative capacities in the school plant. The surface can be treated in various ways in order to remove it from human contact. If the surface has been damaged, the contaminant fibers are being released, and a procedure to remove the asbestos from human contact MUST be completed.

B.7 Behavioral Precautions
(from B. Carnow's Health Hazards in the Arts and J. Harrison's Art Smart - see Resources)

Preventative and precautionary behaviors will enable students and teachers to use art materials in safe ways. The effects of using hazardous materials can be minimized.

- Find out the contents of the materials you use. You may have to write to the manufacturer to get this information. If toxic, use and store appropriately. Look for substitutes. Consider other forms (e.g., liquid instead of aerosol).

- Keep the work area clean. Use and teach hygienic practices. Store all liquids in sealed containers. Cover powders. Keep bulk volatile substances in separate storage areas. Wet mopping is recommended over dry sweeping.

- Personal hygiene is essential. Wash hands after using solvents, metals or other toxic substances. Keep fingernails short and clean when using lead, cadmium, mercury, cobalt or similar materials. Do not eat or smoke in the work area to avoid possible ingestion or inhalation of toxic substances. Protective clothing should be worn at appropriate times: safety goggles for grinding, sanding, welding; gloves and long sleeves when using solvents; masks when working with powders, dusts and fumes.

- Work in properly ventilated areas. Keep room cool and humid, not hot, dry or dark.

- When health problems are suspected, make sure that the physician knows the circumstances and the materials that you or your students have been exposed to. The Center for Occupational Hazards, Inc. can provide names of physicians particularly cognizant of the health hazards of art materials.

cont....

C. Art Materials

Materials used in the art room pose health risks ranging from undergoing slight irritation to developing a major illness or disease. Ingestion, inhalation, and absorption are the three methods by which toxic materials irritate the body. Precautionary and preventative measures practised by the teacher will reduce the health risks posed by various art materials.

The following information and format was drawn primarily from the Manitoba Elementary Art Curriculum, 1983. The extensive list of materials and useful precaution/substitution column povided an excellent resource for this section. Materials were added that are often found in junior high art rooms. Again, teachers are advised to go to more extensive primary resources in order to examine fully, hazardous potentials associated with various materials. Once information is acquired, environmental organization and technical behaviors can be incorporated, and health-oriented practices can be taught and practised.

C.1 Dangerous Art Materials

These materials are extremely dangerous and must not be used:

Aerosal fixative sprays
Arsenic oxide (glaze)
Asbestos
Benzene

Benzedine-type dyes in some colored papers
Cadmium silver solder
Carbon disulfide
Carbon tetrachloride
Chloroform
Cyanide solutions (potassium ferro cyanide)
Dioxane
Ethylene dichloride
Lead chromate
Methyl butyl ketone
Methyl hydrate
Perchlorethylene
Phenol
Talc clays
Tetra chlorethylene
Tri chlorethylene
Uranium oxide (glaze)
Vermiculite
Zinc chromate

cont....

C.2 Hazardous Art Materials*

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Aerosol Sprays	- organic solvents used in the sprays - very fine particles of resins, paints, or lacquer propelled into the air - greatest danger by inhalation of mists - highly explosive	- paints containing highly toxic pigments SHOULD NOT BE USED - use only in a ventilated area or substitute other techniques for the application of coatings - use water soluble materials if possible - never use mouth atomizers
Asbestos (used in room as insulation, acoustical, decorative, fireproofing)	- asbestosis, lung cancer, and mesothelioma from damaged surfaces releasing fibers	- GET RID OF by stripping, enclosure, and encapsulation (see O.H. Branch)
Bark	- dermatitis from some species	- gently wash burlap before using it if this is a problem
Benzene	- may destroy bone marrow causing a plastic anemia and leukemia	- DO NOT USE; use toluene or xylene, with precautions
Burlap	- dust - skin allergies - irritation if treated with formaldehyde	- gently wash burlap before using it if this is a problem
Candle Making	- dyes, mould release possibly toxic - fire hazard from heating wax - irritating fumes released from over-heating	- paraffin is safe - use only double boiler method for melting wax - use ventilation
Carbon Tetrachloride	- highly toxic; known to cause liver cancer	- DO NOT USE
Cedar	- skin	
Ceramic Tiles	- eye damage from glass splinters - hand cuts from sharp edges	- wear goggles to protect eyes - wear gloves to protect hands

* Adapted from Appendix A: Hazardous Art Materials, 7-9 ART Manitoba; Department of Education, 1983.

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Charcoal	- may contain carbon black (carcinogenic due to impurities)	- use only non-toxic types - use vine charcoal - use vinyl or rubber gloves when using sticks
Clay	- silicosis (potter's lung) from inhalation of dust from dry clay - cuts and abrasions from wet clay with grog - dermatitis from bacteria mould or fungus in wet clay with grog	- buy clay wet - always use clay wet - use clay without grog for young children - mix or sand within local exhaust hoods provided 1.5 m/s face velocity - get lung x-ray and have pulmonary function test every second year if you use clay frequently in the program; current literature indicates pulmonary function taken over many years is a better indicator of problems than is x-ray for silicosis
Clay - Low Fire	- fumes from firing - can be a talc body (usually contains asbestos)	- kiln vented to outside by canopy hood providing capture velocity of .25 m/s - use non-talc clays - insist on asbestos-free clay
Clay Talc Bodies (Low-Fire Clay)	- may contain as much as 20% asbestos	- don't use talc clays (usually found in low-fire clay)
Colored Acetate Inks	- acetate solvents (eye, nose, throat irritant) used to etch color onto the acetate	- use water-soluble inks with a small amount of detergent (one drop); roughen plastic with 0000 steel wool to help ink adhesion OR - use coated acetate sheets (cells) that will take ordinary colored inks and dyes
Colored Inks	- may contain benzedine-type dyes, (can cause bladder cancer)	- use in areas .25 m/s capture velocity - use only those labelled non-toxic - use food coloring

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Construction Paper	- may contain toxic dyes as color - may be treated with fungicide (mercury compounds)	- use non-toxic materials - avoid wetting the paper - prevent students from chewing the paper or putting it in their mouths
Copper Metal	- slight toxicity (will cause allergies in some people) - metal fume fever from copper powder (sanding dust) possible	- use a fume hood
Copper Tooling Toner	- liver of sulphur (potassium sulfide) used in toner - moderate to high toxicity - dermatitis - alkali and hydrogen sulfide, products of decomposition	- wear goggles and gloves when handling - use a fume hood
Cotton Duck or Canvas	- dust - skin allergies if treated with fungicide (irritant)	- wash fabric before use if it causes a problem
Crayons	- toxicity of some brands	- use only non-toxic crayons - leave paper wrapper on to protect fingers from contact with the wax
Cyanotypes	- potassium ferrocyanide used in activity - highly toxic hydrogen cyanide gas released when decomposed after heating, addition of acid, sitting after heating, addition of acid, sitting after being mixed, exposure to ultraviolet light (fluorescent light and sunlight)	- this is a dangerous chemical that should never be used in the classroom - use portrait proof paper (no developing required) or blueprint paper exposed with sunlight

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Developer	- skin and eye irritation - toxic by inhalation	- use mechanical ventilation - use gloves and goggles; never put bare hands in developer solution - use tongs - use care in cleaning up
Etching Acids	- strong irritants, especially in concentrated form, of eyes, nose and throat - gases and mists are inhalation hazard	- mixing and etching should be done under local ventilation to prevent inhalation of acid mists; trays should be in a back-drafted hood, providing a mininum of capture velocity of 0.5 m/s
Electric Fry-Pan (for heating wax)	- irritating fumes released from pyrolization of wax spatters over pan	- cover exposed parts of pan with removable aluminum foil and replace frequently - use pan in good repair
Epoxy	- toxic by skin contact and inhalation	- wear gloves and goggles - use a fume hood
Feathers	- anthrax infection possible from wildfowl feathers	- use domestic fowl feathers or processed (pre-colored) feathers from a craft store
Felt Pens	- toxic organic solvents in permanent types	- use non-toxic, water-soluble markers

Fibre Dyeing (Natural Dyes)	- moderate toxicity from roots such as logwood
	- salmonella contamination of cochineal
	- mordants; of particular concern are
	  - Oxalic acid: high toxicity
	  - Potassium dichromate (chrome): suspected carcinogen
	  - Tannin (tannic acid): suspected carcinogen
		- vegetable sources are usually safe
		- prevent ingestion and inhalation
		- use mask and gloves
		- use extreme caution in handling these chemicals
		- use gloves, goggles, and respirator or mask (3M-8710) when handling these powders

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Fibre Dyeing (Synthetic Dyes)	- irritation of eyes, respiratory system and skin from fine powders - bladder cancer from direct dyes - liver cancer in animals from other types (Rit and Tintex are mixtures of direct and other dyes)	- treat all synthetic dyes with great care, using goggles, gloves, and respirator or mask (3M-8710) - clean up any spills with large quantities of water; any dye that is not cleaned up will become powder when dry and will remain toxic - use fume hood when handling - use alternates (food dyes)
Finger Paint	- toxicity of some types	- use only non-toxic types - make your own (see recipes at end of this section)
Fixer (Sodium Thiosulfate)	- may contain toxic chemicals or irritants such as alum, boric acid, or formaldehyde (in addition to sodium thiosulfate) - toxic sulfur dioxide released upon decomposition	- ventilate fixing bath - use caution in handling and mixing fixer - fixer is not as toxic as developer or stop bath
Fur	- anthrax infection possible from working with unprocessed fur	- use processed (tanned) furs
Glass Staining	- highly toxic dyes and solvents - may contain toulene, xylene	- use fume hood and gloves if dyes are solvent based - use safer water-soluble acrylics
Glaze	- dry powders*** - toxic oxides (or highly toxic): - antimony oxide - asbestos*** - barium carbonate - berylium, beryllia */*** - bone ash (calcium phosphate) - borax, boric acid	*carcinogen or serious toxin ***very fine particles

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
	- cadmium* - chrome yellow** - chrome oxide* (lead chromate) - cobalt - copper carbonate,* malachite - cryolite, cornish stone* - feldspars: silica (silicosis)*** - fluorspar* - iron chromate* - lead compounds: raw, fritted - lithium carbonate: irritant (powerful mood-altering drug) - manganese carbonate - manganese dioxides: nerve toxin - naples yellow: lead - nepheline synenite - nickel carbonate,* oxide - potash - potassium dichromate* - pumice - soda ash - sodium silicate - talc - asbestos* - uranium oxide** - vandium oxide* - vermiculite* - zinc yellow** - zircon zircopax*	*carcinogen or serious toxin **no known safe level ***very fine particles
Glue	- toxicity of some glues	- avoid contact adhesives (solvent), rubber cement (solvent), epoxy (hardner, toxic), formaldehyde - resin (resorcinol) - use safe, non-toxic white glue or PVA (polyvinyl acetate emulsion)

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Grout	- caustic burns to eye lining - skin problems for some people - slow healing of open sores or cuts after exposure to grout	- avoid eye contact, use goggles - protect hands by using vinyl or rubber gloves
Gum Arabic (Gum Acacia)	- respiratory allergies when inhaled as in enamelling	- use a respirator or mask (3M-8710) - use a fume hood - use sugar or syrup solution as a binder
Gum Tragacanth	- respiratory allergies/asthma when inhaled as in enamelling	- use respirator or mask when mixing powders - use fume hood - use sugar or syrup solution as a binder
Hemp	- dust - skin allergy - toxic if treated with formaldehyde	- use gloves
Hessian Burlap	- dust - skin allergy - toxic if treated with formaldehyde	- gently wash burlap before use if a problem
India Ink	- may contain carbon black contaminated with aromatic hydrocarbons (carcinogen)	- use non-toxic types, such as fountain pen ink - if using India ink of unknown quality, do so with mechanical ventilation
Ink - Colored	- dyes (use entry under Fibre Dyeing) - solvents - pigments (see entry under Pigments)	- use non-toxic inks - avoid skin contact - clean up spills thoroughly, using rubber gloves, a sponge and large quantities of water - do not clean up with bleach as this can create a more severe problem; many chlorinated chemicals are carcinogenic - substitute colored food dyes

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Jewellery	- fine metal file dust - solder - acid	- keep work area clean by wet cleaning or vacuuming - use a fume hood for processes that create fumes; i.e., soldering
Jute	- skin or respiratory allergy enamelling	- it may be necessary to use a dust mask (3M-8710) or wear vinyl or rubber gloves when working with jute
Lead (Glaze, Soldering, Stained Glass)	- toxic at low levels, especially for young children - suspected mutagen and teratogen - inhalation can result in kidney and liver damage	- use only lead-free glazes - solder only in a fume hood - stained glass using lead came and copper foil is not a recommended activity for elementary children, supervision in junior high grades is essential
Leather	- toxic chrome salts used for tanning some leather - skin allergy - poisoning possible if chewed	- prevent students from chewing leather - do not use with young children
Leather Tooling (Leather Kits)	- toxicity of leather dyes (both dyes and carrier solvents)	- use only non-toxic dyes such as those that are ethyl-alcohol based - wear gloves - use mechanical ventilation (fume hood)

Lost Wax Casting (Jewellery)	- investment or moulding compounds may contain:
	  - silica: silicosis
	  - asbestos: asbestosis, lung cancer, intestinal tract cancers
	  - and may produce fumes: highly irritating to lungs and eyes
		- use only non-silica investment
		- beware of asbestos content
		- burnout should be ventilated

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Magazines	- preservatives in paper - lead chromate inks present in colors	- prevent students from chewing the paper
Mahogany	- skin irritation	
Metal Fumes	- toxic byproducts when heating lead, copper, solder; welding; firing bisque and glaze kiln	- use mechanical ventilation or fume hood - the odour of fumes in the air is a warning of danger
Methyl Hydrate	- highly flammable - highly toxic by skin contact (nerve, liver, kidney damage; blindness; death)	- use grain (ethyl) alcohol
Mineral Spirits	- eye, nose and throat irritant and central nervous system depressants	- proper ventilation and storage
Modelling Materials (Papier Mache)	- fine dust in commercial product - lead chromate and other inks on paper - preservatives	- use only non-toxic materials
Modelling Materials (Plasticine)	- china clay, oil base, dyes (color), preservatives, silicates, turpentine - ingredients toxic by ingestion - skin problems (some brands)	- use only non-toxic brands - it may be necessary to have some children use barrier cream on their hands, but check with parents first - have students put hands under plastic bread bags or wear vinyl gloves
Modelling Materials (Self Hardening)	- may contain asbestos	- use only asbestos-free clay - use only non-toxic clay
Newspaper	- skin allergies for some people from oil in ink - may be treated with fungicide (irritant) - lead chromate (carcinogen) in some colored inks	- use only black and white sections for papier mache.

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Paint (Tempera Disk or Block)	- may contain toxic pigments or dyes - may contain irritants such as binders (gum arabic and tragacanth) - may contain preservatives	- tempera disk or block is the safest form of tempera for classroom use - clean up spills promptly (e.g., water dish) with a wet sponge or wet mop - do not allow students to paint their skin - use products labelled non-toxic
Paint (Tempera - Liquid)	- may contain toxic pigments or dyes - may contain irritants such as binders (gum arabic and tragacanth) - may contain preservatives	- clean up spills promptly with a wet sponge or wet mop - do not allow students to paint their skin - use products labelled non-toxic
Paint (Tempera - Powder)	- may contain toxic pigments or dyes - inhalation of powder dust	- never let young children use powdered tempera; use not recommended in public schools unless pre-mixed by teacher - use other forms of tempera - do not allow students to paint their skin - use products labelled non-toxic
Paper	- fungicides, such as mercury compounds, often used to treat paper	- prevent students from chewing and eating paper
Paper (Construction, Tissue, Crepe)	- fungicides often used to treat paper - azo or benzedine in direct dyes for color (benzidine is known to cause bladder cancer)	- insist on non-toxic paper - moderately safe when dry, avoid wetting - crepe paper will contain flame proofing chemicals (borax compounds, TRISS)
Paste	- may contain formaldehyde or mercury fungicide	- use non-toxic paste
Pastels	- toxic dust of fine pigments in chalk pastels - same pigments as used in paints (see entry under Pigments)	- don't use with young children - use only oil pastels - have children be careful to keep hands clean - wash with soap and water

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Photography	- a number of health problems from photo chemicals	- see notes at beginning of this section
Pigments	- poisonous pigments: - Burnt Umber (manganese) - Cadmium Red, Yellow, Vermillion, Orange) All are highly toxic human carcinogens. - Carbon Black (lamp black): skin cancer largely due to impurities from repeated contact - Chrome Green: human carcinogen, skin irritations, allergies - Chrome Yellow: human carcinogen, skin irritations, allergies - Cobalt Blue: skin allergies, asthma from inhalation - Cobalt Violet, cobalt arsenate: skin allergies - Flake White (lead carbonate): poison by ingestion, damage to vital organs and peripheral nerves from inhalation - Lemon Yellow (barium, strontium or zinc chromate): human carcinogen - Manganese Blue and Manganese Violet: nerve damage from inhalation or ingestion - Naples Yellow (lead antimoniate): toxic mutagen - Phthalocyanine Blue (Thalo Blue, Phthalo Blue): carcinogen, mutagen, teratogen, from PCBs (usual contaminant) - Phthalocyanine Green: same as Phthalocyanine Blue	- pigments are common to most art techniques requiring color - many pigments still being used in the classroom are poisonous; all are poisonous by ingestion and inhalation

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
	- Raw Umber: toxicity from iron and manganese - Vermillion: mercury poisoning from mercury sulfide or cinnabar	
Plaster of Paris	- irritation of eyes and respiratory system from dust - will dry skin	- Plaster of Paris is non-toxic, but the dust can be irritating; use care when handling the powder and wear dust mask (3M-8710) or respirator
Plastics	- fumes from heating: - formaldehyde - carbon monoxide - hydrogen cyanide (amino resins) - phenol - styrene gas (styrofoam)	- normal handling is reasonably safe - use hot wire cutters in a fume hood
Potters Wheel	- physical hazard if too large for the student	
Pottery Kilns	- produce carbon monoxide, sulphur monoxide, sulphur dioxide, sulphuric acid, pyrolized carbons, metal fumes from metallic oxides present, such as iron, chrome, cobalt, manganese and vandium	- kilns should be installed and used only under fume hoods with mechanical extraction sufficient to remove emissions (capture velocity of .25 m/s) - kilns preferably should be in a separate room and not in the classroom
Printing Ink	- toxicity of solvent (oil)-based inks	- use solvent-based inks only in a fume hood - use water-based inks - use mechanical ventilation (fume hood)

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Printmaking (Screen-printing)		
GS51 Adhering Fluid	- highly flammable - central nervous system toxin: depression - irritant to eyes, nose and respiratory tract	- use mechanical ventilation (fume hood)
Hide Glue (Lepages Liquid Strength)	- preservatives: skin allergy	
Silkscreen Inks	- contain many different aromatic hydrocarbons (toxic)	- use only on a cross-drafted table, with a capture velocity of .5 m/s - use alternate water-based, water-soluble silk screen inks such as Speedball Non-Toxic Inks
Super Blox	- methlene chloride - central nervous system depressant producing delusions	- there are no apparent problems with Speedball Photo Emulsion or Ulano Blockout which can be used instead
P.V.A. (Polyvinyl Acetate) (Water Emulsion)	- eye irritant (ammonia) - may contain irritant preservative, formaldehyde	- use ventilation - avoid skin contact, use gloves
Sandpaper	- sanding dust	- use approved dust mask (3M-8710) - stop frequently and clean up with wet sponge
Shellac	- volatile solvents - may contain methyl hydrate	- use mechanical ventilation (fume hood)
Shingles	- cedar shingles and shakes: toxic sawdust - asphalt shingles: tar aromatic hydrocarbons toxic	- wear a dust mask (3M-8710) when working

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Shoe Polish	- may contain toxic solvents	- use sparingly - use mechanical ventilation
Silicone Mould Release (Candle-making)	- toxic by inhalation	- use mechanical ventilation (fume hood)
Silver Solder	- cadmium fumes (known carcinogen) - preservatives: skin allergy	- use cadmium-free solders - use a fume hood
Soapstone (Soft Stones, Serpentine)	- free silica when sanding or cutting - asbestos	- use goggles - use soft stone such as limestone, pipestone which are asbestos-free - if using soapstone,use masks (3M-8710), goggles, and gloves - clean up often during project - wet mop or vacuum afterwards
Soldering	- lead fumes: lead poisoning - flux: zinc chloride, corrosive to the skin, eyes and respiratory tract	- use mechanical ventilation - use a fume hood - local exhaust system
Solvents (Toluene and Xylene)	- lung irritants, may cause (in high concentrations) damage to the central nervous system	- use mechanical ventilation
Stained Glass	- lead came - lead solder - zinc chloride flux - lead known poison - burning of skin, eyes, and respiratory system from zinc chloride fumes	- cellophane and cardboard alternate activities or do glass staining with acrylics - advise students of proper conduct; maintain supervision - ventilation essential when soldering; local exhaust system

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Stop Bath (Acetic Acid)	- highly toxic by inhalation, skin contact and ingestion	- do a careful clean-up afterwards - the use of goggles and gloves is mandatory - use mechanical ventilation
Styrofoam	- toxic gases released when heating (hot wire cutters, blowtorch, matches), especially styrene gas: known narcotic, respiratory and eye irritant, possible nerve and liver damage	- use a knife to cut or if using hot wire cutter, do so only in a fume hood
Talc	- in white clays and low firing clay, may be contaminated with asbestos fibres	
Tarpaper	- toxic aromatic hydrocarbons	- use non-tar building felt
Tissue Paper	- benzedene in some colored varieties (bladder cancer)	- use only non-toxic-type papers
Turpentine	- highly flammable; skin irritant; eye, nose and throat irritant; central nervous system depressant	- use ventilation - store in ventilated storage
Varnish	- volatile solvents	- use mechanical ventilation (fume hood)
Vinyl Chloride	- may cause cancer of the liver	- used in making plastic articles; unknown number of exposures may cause problems
Wallpaper Paste	- may contain formaldehyde or mercury fungicide	- prevent children from eating it - use non-toxic paste - make up your own (see recipe at end of this section) include recipe

C.2 Hazardous Art Materials (cont...)

MATERIAL/MEDIUM	HAZARD	PRECAUTION/SUBSTITUTE
Wax	- toxicity of some waxes - release of acrolein fumes and other irritants from overheating	- use food-grade paraffin waxes - use a double boiler to control heating
Wood	- boxwood, cedar, rosewood, teak: respiratory, eye, and skin problems, skin allergies	- use safer woods such as spruce or pine
Wool	- possible anthrax infection when working with raw wool	- be certain of the source; get supplies only from a reliable dealer - use fumagated fleece - use a dust mask (3M-8710) if wool fibres cause irritation
Yarns	- possibility of anthrax in wool yarns, hand spun	- be certain of source of raw fleece; get supplies only from a reliable dealer
Zonolite, Vermiculite	- asbestos contaminated (human carcinogen)	- don't use in the classroom; substitute other materials such as sawdust or coffee grounds

HAZARDOUS ART MATERIALS AND OCCUPATIONAL SAFETY
(cont...)

C.3 Glossary (from Design Criteria for the Control of Health Hazards in the Schools)

Allergen: a substance causing an abnormal response in a hypersensitive person.

Capture Velocity: air velocity at any point in front of the hood necessary to capture and remove air contaminants.

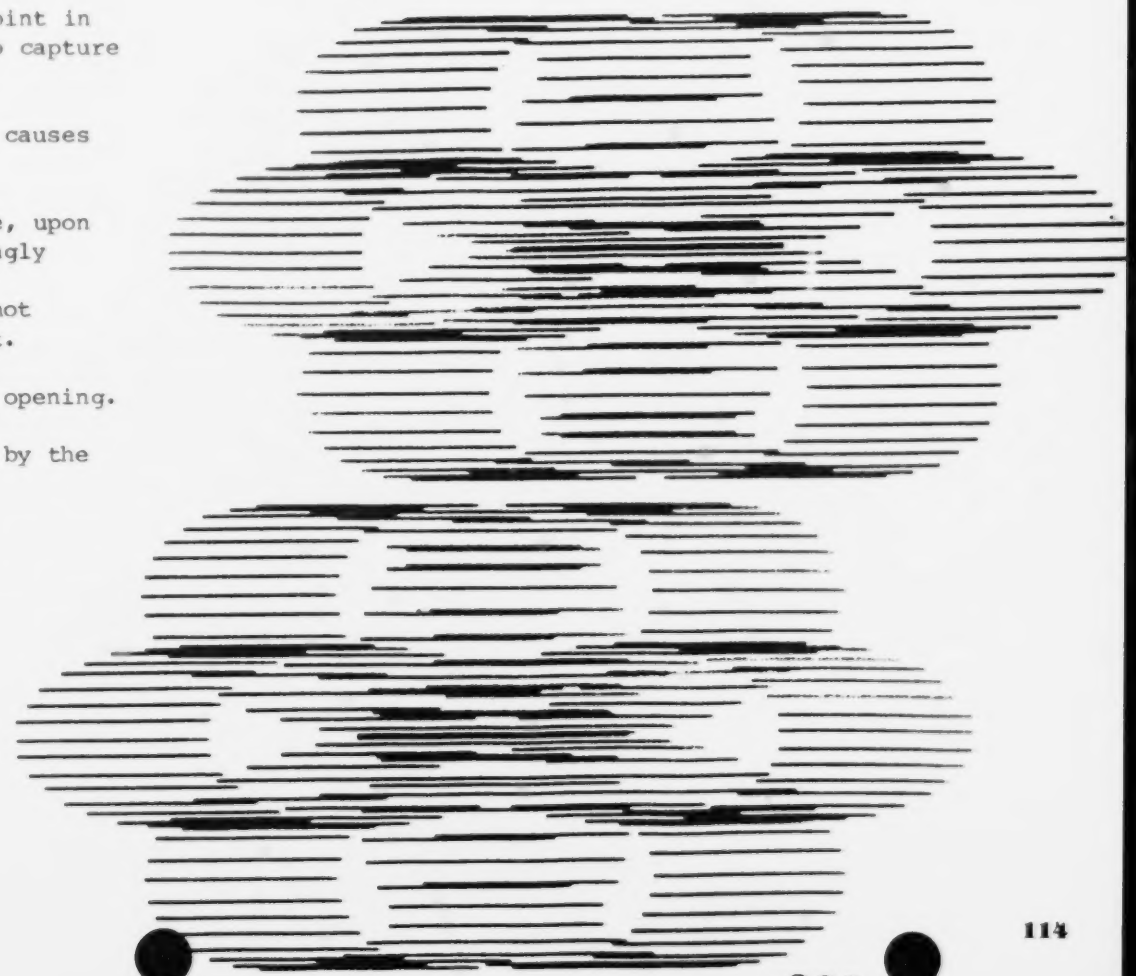
Carcinogen: any substance or agent that causes cancer.

Chemical Sensitizer: a substance capable, upon contact, of inducing increasingly adverse effects upon a given individual; such effects are not limited by the area of contact.

Face Velocity: air velocity at the hood opening.

Fumes: small solid particles created by the condensation of vapors.

Vapor: gaseous form of a substance.



Technographic Media

The nature of learning in the arts makes an integral connection with technology, since no art exists until it is made and 'making' is a technological process. Many of the concepts contained in this new art program can be taught and practised through the use of computers and other technographic media, such as cameras, overhead projectors, copiers, the laserdisc image bank, movie cameras, videotape and slides.

Computer-assisted learning is an effective way to deal with image-making that uses moving points, lines, changing points of view, figure rotation, proportion, and magnification. Wherever variables occur in images -- size, tone, color gradations, marks -- computer graphics can provide a new and challenging method of learning. A variety of computer graphics programs are now available. Review the program for content focus (e.g., drawing? shape? animation?) compatibility with school equipment and cost.

Computer-assisted instruction is also a viable means of conveying information to students. The following art concepts are readily convertible to self-instructional methods: color relationships, perspective drawing, motion sequences, 3-D modelling, special graphic effects, overlapping, image rotation, enlarging, reducing, film animation, and poster layout can all be self-taught through microcomputers.

The laserdisc 'Sightlines' can be combined with a teacher designed computer program to provide individual or small group learning sessions. The programs could be structured to accompany curricular themes being studied. As well, the storage and retrieval of much art classroom information can be handled with a computer. Students can maintain records of work-in-progress, reports and anecdotal records of aesthetic criticisms. Information about avaialble and appropriate media, supplies and processes can be managed by computer programs. The laserdisc image bank is catalogued for retrieval by computer, and students can select images for their own individual viewing and to plan presentations in this way.

A major advantage of the use of modern technographic media is the immediacy of feedback of imagery that allows testing of ideas, manipulation of compositions and the storage of many visual ideas. The imagery that results from the use of these valuable new tools must still be initially created by the student.

Technographic Media: Possibilities

- Take advantage of visual art implications of any available technological devices and explore the potential of emerging technologies.

  *simple camera used for specific purposes such as close-ups, medium shots, long shots of same subject matter; various viewpoints, action, composition

  *overhead projector for experimenting and composing with shape, line, color including using fluid media (water, oil, food coloring), colored acetates

cont....

TECHNOGRAPHIC MEDIA (cont...)

*computer and computer software package and input devices such as light pen, Koala pad, mouse, tablets, H-Plot, and any other advancements in this area to explore design, compose, animate and program, to make geometric shapes and designs

*copy devices or Xerox to make compositions that involve paste-ups, distortions, reductions, block-outs

*laserdisc visuals interfaced with the computer for study and motivation purposes.

*8mm movie camera for documentation, sequencing, capturing movement, animation

*lighting sources such as spotlights, flashlights, overhead projector light, strobe lights, and black lights for experimentation.

*video camera to compose

*slides for recording and sharing; handmade for understanding composition and pattern

*emerging new technologies as available and applicable.

- Employ technological media techniques, practices and capabilities to promote art understandings and create designs and compositions.

*pinhole camera construction

*developing film

*drawing directly on film or scratching for animation

*selecting and synchronizing music and/or sound effects for a set of slides, short film, videotape

*making or capturing visuals that carry a story and/or accompany a script

*handmade slides

*photographing work-in-progress, finished works to keep a record of skill development

*adjustable framing devices to select and cut out scenes from a larger picture and to sequence

*photograms

*printers to record computer compositions (or direct photography off the screen)

*animation techniques available through computer software packages

*simple film animation with jointed figures, moveable paper shapes or plastic modelling clay models

*lighting techniques for highlighting and creating an effect or mood